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ONTARIO

P R O C E E D I N G S

of the

SELECT COMMITTEE APPOINTED BY THE ONTARIO LEGISLATURE  
TO ENQUIRE INTO CERTAIN MATTERS AND LEGISLATION  
REGARDING SMOKE CONTROL AND AIR POLLUTION IN ONTARIO.

Mr. A. H. Cowling, Chairman.

Dr. F. A. Evis, Secretary.

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Monday, December 10th, 1956.

TORONTO, Ont.

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R. C. Sturgeon,  
Official Reporter,  
Parliament Buildings,  
Toronto, Ontario.







F O R T Y - F O U R T H      D A Y

Toronto, Ontario,  
Monday, December 10th, 1956,  
10:00 o'clock, a.m.

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The further proceedings of this Committee  
reconvened pursuant to adjournment.

Mr. A. H. Cowling, Chairman,  
Presiding.

- - - -

PRESENT:

Messrs. Elliott,  
Murdoch,  
Macaulay, Q.C.,  
Morningstar,  
Gordon,  
Thomas (Oshawa),  
Hon. Mr. Kelly,  
Dr. F. A. Evis, Secretary.

APPEARANCES:

Mr. A. D. MacRae,	Chairman, Imperial Oil Ltd., Sarnia.
Mr. L. Browne,	Canada Packers Ltd. (Representing Peterboro Branch of C.M.A.)





Mr. John C. Bonham,	Assistant Plant Engineer, Ford Motor Co. of Canada, Limited, Windsor, Ont.
Mr. Martin J. Cahill,	Director of Public Relations, The McKinnon Industries Limited, St. Catharines.
Mr. Arthur Davies,	Plant Manager, Grinnell Co. of Canada, Ltd., Toronto.
Mr. A. T. Fell,	Mgr. Maitland Works, DuPont Co. of Canada Limited, Maitland.
Mr. A. D. Fisher,	General Supt., The Steel Co. of Canada, Ltd., Hamilton.
Mr. J. Gregory,	Canadian Carborundum Co. Ltd., Niagara Falls.
Mr. John G. Hall,	Combustion Engineering Superheater Limited, Toronto.
Mr. L. W. Haslett,	Vice-President, Canadian Industries Ltd., Toronto.
Mr. J. B. Jones,	Vice-President, Manufacturing, The Ontario Paper Co. Limited, Thorold.
Mr. A. R. Neville,	Manager, The Canada Metal Co. Ltd., Toronto.
Mr. B. C. Newbury,	Ontario Research Foundation.
Mr. A. C. Sanderson,	Toronto Brick Co. Ltd., President.
Mr. J. A. Schmidlein, ) Mr. C. W. Smith, )	North American Cyanamid Limited, Niagara Falls.





Mr. Gordon T. Wishart,	Vice-President and General Manager, Metals and Alloys Ltd. Leaside.
Mr. G. C. Bernard,	Manager, Ontario Division Canadian Manufacturers' Association, Toronto.
Mr. D. A. Gillis,	Canadian Manufacturers' Association, Toronto.
Mr. D. Bronstein,	Markad Co., Toronto.

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THE CHAIRMAN: Gentlemen, I will call the meeting to order.

We are glad to have the Canadian Manufacturers' Association represented by so many here today. I would like to introduce to you the members of our Committee.

First, on my left, is Mr. William Murdoch, the member for Essex South; Mr. Ellis Morningstar, the member for Welland; Mr. George T. Gordon, the member for Brantford; Hon. Mr. Kelly, Minister of Mines; Mr. T. D. Thomas, member for Oshawa; Mr. R. E. Elliott, the member for Hamilton East, and Doctor Fred Evis, our Secretary and medical advisor, and Mr. Harry Belyea, our technical advisor.

As you know, this is a Select Committee of the Legislature, composed of representatives of all Parties in the House, and we are charged with the





responsibility of looking into and studying the matter of air pollution and smoke control, and reporting back to the Legislature.

We have submitted an interim report, which was presented to the House last March, and we will have to put in another and final report at the forthcoming Session.

I think that pretty well brings you up to date.

We are here today to listen to representatives of the Air Pollution Committee of the Canadian Manufacturers' Association, and I will call upon Mr. A. D. MacRae, from the Imperial Oil Limited at Sarnia, to come forward at this time and possibly introduce the members who are here today, and to take over the meeting from here on in.

MR. MacRAE: Thank you, Mr. Chairman.

In opening our presentation, I would like to express our thanks to you, Mr. Chairman, and the members of your Select Committee for the privilege of presenting this brief.

As you know, the Canadian Manufacturers' Association was asked some three months ago to draw up a resolution stating industry's viewpoint, and to report to the Select Committee, and also to put





forth any helpful suggestions which might be of assistance to you, and with that in view, we held our first meeting in Toronto some two months ago. We had a very good representation from the manufacturers of Ontario. There were some sixty-five people there.

From that group, there was a sub-committee appointed, consisting of some seven or eight members representing all types of major industry in Ontario.

We have with us today, Mr. Fell, of the DuPont Company of Canada Limited; Mr. Cahill, from The McKinnon Industries Limited, Mr. A. D. Fisher, General Superintendent of The Steel Co. of Canada, Ltd.; Mr. Gregory, from the Canadian Carborundum Co. Ltd. of Niagara Falls, that is, the abrasive industry; Mr. John G. Hall, of the Combustion Engineering Superheater Limited, Engineering Consultants; Mr. Sanderson, from the Toronto Brick Co. Limited; Mr. Wishart, from the Metals and Alloys Limited; Mr. Bonham, from the Ford Motor Company of Canada Limited, at Windsor; Mr. J. B. Jones, from The Ontario Paper Co. Limited, Thorold; and Mr. Haslett, from Canadian Industries Limited; Mr. Davies, of the Grinnell Company of Canada Ltd.; and Mr. A. R. Neville, of the Canada Metal Co. Limited.

I will suggest, with your permission, Mr. Chairman, that Mr. G. C. Bernard, Manager, the Ontario





Division, Canadian Manufacturers' Association, read our presentation, and I think it will be entirely in order for you to interrupt as you see fit, and ask any questions, or make comments.

I will be glad, with your permission, to call upon ~~Mr.~~ Bernard to make this presentation.

THE CHAIRMAN: Thank you. Mr. Bernard, would you mind if we interrupt with our questions as you proceed with the brief?

MR. BERNARD: Not at all.

THE CHAIRMAN: I think that might be the best idea, while the questions are fresh in our minds.

MR. BERNARD: Please feel free to interrupt at any time, and ask any questions which may occur to you.

MR. MacRAE: And may I say, Mr. Chairman, that we have our panel of experts here, if you wish to refer to any special topic.

THE CHAIRMAN: Thank you. Let us keep the meeting strictly informal. We are here for the benefit of everybody concerned, and if anybody wishes to say anything at any time, they are free to do so.

G. C. BERNARD,

Manager, Ontario Division, Canadian Manufacturers'



Association, appearing before the Committee, but not being sworn, deposes and says:

BY THE CHAIRMAN:

Q. We would be very glad indeed to hear anything you have to say to us, Mr. Bernard.

A. Mr. Chairman and gentlemen of the Select Committee; this memorandum is addressed to you, sir, as Chairman, and to the members, and is a submission by the Ontario Division of the Canadian Manufacturers' Association to your Select Committee on atmospheric pollution and smoke control. It reads as follows:

"Gentlemen:

The Ontario Division of the Canadian Manufacturers' Association appreciates the opportunity afforded it to submit to the Select Committee on Air Pollution and Smoke Control, its views on the important matter of air pollution legislation. The Ontario Division of the Association comprises 3,220 members and its Special Committee on Air Pollution may be said to be representative of the major classifications of the manufacturing industry in Ontario.

The Select Committee of the Ontario Legislature has, it is noted, produced an interim





report on its activities. Furthermore, the Government of Ontario has, the Association feels, shown foresight in initiating a programme designed to control pollution in Ontario in order to prevent the possible growth of the problem from reaching serious proportions.

In the next few years many new developments which may well become contributors to air pollution will be entering the scene, as for example, the opening of the St. Lawrence Seaway with its anticipated effect on industrial expansion. The application of nuclear energy is also a factor which must be taken into consideration. Industry realizes that increasingly higher standards of living bring with them a corresponding demand for greater production of existing and new products, and that this will result in a greater volume of effluents and probably new and hitherto unknown pollutants.

Many authorities in the field of air pollution have pointed out that there has been insufficient exploration and research into pollution problems; for example, it is now known that the hygienists' eight-hour exposure





data cannot be extrapolated to indicate the response to twenty hour and fifty hour exposures on the part of the community during adverse weather conditions."

BY THE CHAIRMAN:

Q. I wonder, Mr. Bernard, if you would stop there, and speak for a moment about that paragraph, for the benefit of the Committee members.

MR. MacRAE: About the exposure?

THE CHAIRMAN: Yes.

MR. MacRAE: I think perhaps Mr. Newbury could speak to that.

MR. NEWBURY: Mr. Chairman and gentlemen; you probably realize we have to put up with a number of these compounds which have to be related, and in the past, the hygienists' work in industry has determined the safe concentration of sulphur dioxide, chlorine and other compounds, which the people working in the plants can stand for a period of eight hours, without too much effect on their health.

During the "smog" episodes which have taken place in large cities in the past, we found that members of the public have suffered in health with concentrations which were very much lower than the ones allowed in industry. In other words, while you may allow a



man in industry to breathe one part per million for eight hours, and have no ill effects, if you have him breathe one-tenth of a part per million, and subject him to it continuously for three or four days, then you will get health responses.

In other words, it seems that an exposure of eight hours with sixteen hours away in a clear atmosphere gives the public a chance to recover, but if you try to live for forty-eight or sixty hours in this concentration, you get a health problem.

In other words, we are attempting to find now the maximum allowable concentration of these pollutants which can be allowed in an atmosphere for the general public to breathe for long periods of exposure, but, at the moment, we have no idea of what those figures will be or the relationship they will bear to presently-accepted eight-hour exposures.

MR. BRONSTEIN: These exposures are under investigation?

MR. NEWBURY: There has been a great deal of work done on them.

MR. BRONSTEIN: Is not the exposure data available in many American cities which have already gone through this particular phase of air pollution?

MR. NEWBURY: Not an allowable concentration, no.





MR. BRONSTEIN: It seems to me, with complete respect, that this data is available in American cities.

MR. NEWBURY: No, sir. Take the London fog in 1952, for instance, which was about one and one-half parts per million of sulphur dioxide, where 4,000 people died.

But, in Ontario, you will have ten parts per million of sulphur dioxide, and the people work there and do not suffer. We do not know what figure we can allow.

MR. BRONSTEIN: May I ask, through you, Mr. Chairman, a question of Mr. Belyea, as to whether these exposure figures are available to Doctor Greenberg in New York?

MR. BELYEA: Doctor Greenberg will have as much information about this as anybody, and can give you the help required.

MR. BRONSTEIN: May I suggest to this excellent Committee that this figure be made available to the cities.

MR. NEWBURY: I am sorry they are not available.

MR. BRONSTEIN: You have checked them?

MR. NEWBURY: Yes.





MR. ELLIOTT: Have they mentioned the nuclear energy? Have the engineers made any study of that type of energy, whether it will make any difference in the standard of air pollution, and so on?

MR. MacRAE: I think the utmost precautions have been taken. There is no definite project using nuclear energy at the present time.

MR. ELLIOTT: Is the Manufacturers' Association making a study of that?

MR. MacRAE: No.

MR. THOMAS (Oshawa): Is it your suggestion that the Committee should go into this question right now?

MR. MacRAE: In regard to atomic energy?

MR. THOMAS (Oshawa): Yes.

MR. MacRAE: No. I think that is outside the scope of many of us. That will be handled by the Federal government.

MR. THOMAS (Oshawa): Yes, but one of the reasons you mentioned was that in connection with the progress which might be made in this direction, caution should be exercised by the Committee; that is, that you are not quite sure of what will happen in the future.

MR. MacRAE: No. It is another complication in your study.



THE CHAIRMAN: Let us keep it wide open on any part, as we go along. Let us proceed from there.

MR. BERNARD: This goes on:

"During recent years some segments of the public have become unduly alarmed over the implications of air pollution."

BY MR. MACAULAY, Q.C.:

Q. What do you mean by "unduly alarmed"?

A. Might be alarmed.

Q. Why have you used the word "unduly" in there?

A. We used the term.

Q. Would it be wise to use it as a responsible organization, if you do not know what you mean by the word?

You say:

"During recent years some segment of the public have become unduly alarmed" --  
what segment are you talking about? First of all, let us see who has become "unduly alarmed".

MR. MacRAE: We are speaking of it as a Canada wide problem. We are thinking of the disasters in Denora in 1948, the "smog" in England in 1952, and I think we have all become familiar with the Los Angeles problem where the public is demanding a clean-up, and





the authorities are hard put to it to provide clean air.

BY MR. MACAULAY, Q.C.:

Q. You mean that the public, by asking for clean air, are becoming "unduly alarmed"?

MR. BRONSTEIN: I think the word should be "duly" alarmed.

MR. MacRAE: All right, let us strike out the "un".

MR. MACAULAY, Q.C.: That suits me fine. Now we are to understand that the public is alarmed about the problem about which we are alarmed.

BY THE CHAIRMAN:

Q. Will you proceed, Mr. Bernard?

A. This goes on:

"In the United States and in Canada, laws have been passed governing air pollution and every year new bills are introduced in legislatures, and some of these are enacted into law. Unfortunately most of this legislative pressure is directed into channels which, it is submitted, are not scientifically, economically and socially sound. Some of these channels lead to control of effluent regardless of its effect on the atmosphere in relation to man's uses,



failing to recognize that it is neither practicable nor necessary to maintain the atmosphere in its natural state of quality."

BY MR. MACAULAY, Q.C.:

Q. Do you not believe that it is desirable-- and if you do, say so -- without, at the same time, it standing as a stumbling block to a reasonable programme in Ontario? That is rather a lopsided sentence, but do you not believe that?

You say:

"It is neither practicable nor necessary to maintain the atmosphere in its natural state of quality".

Do you not believe that is desirable?

MR. MacRAE: I would say it is desirable, but somewhat impossible. If we are going to have industry, we must have a reasonable amount of pollution.

MR. MACAULAY, Q.C.: I agree with you, but you have said, "It is not necessary to maintain the atmosphere in its natural state". What did you mean when you said "it is not possible"? You said it was not practicable, but I do not agree it is not necessary. Should you use the word "necessary" in your brief?

MR. THOMAS (Oshawa): That is controversial, but I think we all agree.





MR. FISHER: It is necessary, if we could do it. I think you can maintain a certain amount of pollution.

BY THE CHAIRMAN:

Q. Will you proceed, Mr. Bernard?

A. This goes on:

"One such authority, Dr. Raymond Hess, a pollution expert in the United States, cited as an example, a thirty-five million dollar expenditure by industry in Los Angeles for pollution abatement equipment, before it was realized that the public was a major contributor to the smog problem there. He cautioned that pressures of this sort for large expenditures by industry are constantly increasing. It must be remembered that it is not practical to prevent all waste from reaching the atmosphere because of the unbearable economic burden which any industry endeavouring to achieve such an ideal state of affairs, would incur. Moreover, we submit, it is not necessary to keep all wastes from entering the air because much of the atmosphere is capable of regaining its natural state of quality unaided.

Many important gaps exist in our knowledge



of the sciences related to water and the atmosphere. Dr. Hess, to whom previous reference has been made, observed that filling these gaps is an adventuresome but grave challenge to the highest qualities of research talent. Authoritative persons have stressed that extensive research must be undertaken in such areas as the self purification processes of air, the effects of different types of wastes on each other and on the polluted medium, methods for diverting wastes, reliable analytical methods, establishment of quality standards, and the special problems of nuclear wastes. It is, therefore, imperative that scientists and technologists work closely with legislators and government agencies. Sound laws and regulations cannot be drafted without the full co-operation of scientists and technologists with the lawmakers.

Responsible managements have done much to reduce the nuisances caused by their operations. The resultant expenditure, except in those few cases where recovery of effluents can be turned into a profitable undertaking, must, nevertheless, represent a reduction in profit or a loss of





competitive strength in relation to those who take no remedial action."

MR. MACAULAY, Q.C.: Reference has been made to the increase in state expenditures, perhaps for health and other welfare agencies. I do not think there is any doubt in the world but that Ontario is creating to a large extent -- or some extent, in any event -- a decreased standard of living in one riding, where I am living, in the Don River valley, where there is a tremendous amount of dirt. The people cannot paint their homes, because if they do so, the fly ash sticks to them before the paint is dry.

My constituents sweep up buckets of dirt and nobody can maintain a living standard of cleanliness and health when this stuff is consistently in the air, so it is fair to say you have a situation which reduces the health standards, and I think it is fair also to indicate there must be weighed, on the other hand, the cost to the nation, the province and the municipalities of trying to improve living standards which, because of the existence of this effluent in the air, have caused reductions.

MR. THOMAS (Oshawa): Further to the statement of the hon. member (Mr. Macaulay); it says, "responsible managements have done much to reduce the



nuisances caused by their operations". Some of the industries in his constituency are irresponsible managements.

MR. MACAULAY, Q.C.: I am not commenting on that, but the government knows there have been persons who have realized the problem, and have done their best to cope with it.

I submit, with respect to you gentlemen, there are many industries, and persons in charge of industries in this province, who have not yet realized this.

BY THE CHAIRMAN:

Q. Will you continue, Mr. Bernard?

A. To continue with the brief:

"Again, in the absence of data to show what might reasonably be expected of any particular industry, its management is handicapped by the threat of litigation often launched on faulty premises, which involves an obligation on the part of the industry affected to defend itself in court -- invariably a costly affair. Any action on the part of the Government which will help industry in its desire to fulfill its obligations to the community, will be welcomed. Care, however, must be taken to insure that





industry does not through substantial increased costs, price itself out of the market nor should its programme of progressive planning for the future be endangered.

We are confident that industry in Ontario is prepared to co-operate with the Ontario Government in attempting to solve the problem. The co-operation of industrial firms with highly developed technical and scientific resources, might well be sought to assist government agencies in their work of monitoring the atmosphere.

The federal government has shown its concern in regard to this problem and if its aid is requested through appropriate channels, is, we understand, prepared to assist in various ways, among which may be cited grants in-aid, technical assistance, and the provision of equipment for testing on a loan basis. The federal authorities are planning a national air sampling network in order to help the provinces in assessing the effect of pollution from distant sources."

MR. MACAULAY, Q.C.: May I ask you on what authority you make that statement?



MR. MacRAE: What statement?

MR. MACAULAY, Q.C.: As to what the Federal government is doing, and is prepared to do.

MR. MacRAE: That is from direct conversations with Doctor Morris Katz, who is the air pollution consultant in the Department of National Health and Welfare.

MR. MACAULAY, Q.C.: Let me ask you this, (a) has any money been appropriated by the Federal government?

MR. MacRAE: The money is always there. If a municipality wishes any assistance along those lines, it may apply, through the Municipal Board of the province, and have that Board apply to the Federal people.

MR. MACAULAY, Q.C.: For what?

MR. MacRAE: For grants in-aid.

MR. MACAULAY, Q.C.: Grants to aid what?

MR. MacRAE: Any kind of air pollution.

MR. MACAULAY, Q.C.: Let me get this straight. Do I understand, if a municipality in Ontario wants to make application, it makes it to the Ontario Municipal Board? Under what Act?

MR. MacRAE: I presume the Municipal Act.

MR. MACAULAY, Q.C.: I think that is wrong.



The next step you said was that the Ontario Municipal Board makes application to the Federal government?

With great respect, I think that is wrong. Therefore, have you any other evidence of how it is done?

MR. NEWBURY: Do you dispute this money is available?

MR. MACAULAY, Q.C.: No, I am not disputing it, sir. I am trying to find out how this money is secured. We are sitting here to try and pick up information, not to give it out.

MR. NEWBURY: This money has been available to Regina and Vancouver.

MR. MACAULAY, Q.C.: Would it be too much of an imposition to ask you to send us a note as to the channel --

MR. NEWBURY: I have never asked Doctor Katz about this, but I am told that it is available.

MR. MACAULAY, Q.C.: Are you sure it is available?

MR. NEWBURY: To all the provinces.

MR. MACAULAY, Q.C.: Could we have a memoranda on how to proceed?

MR. NEWBURY: Doctor Evis, did you not get that information when you were in Ottawa?

DOCTOR EVIS (Secretary): We did not get





information as to the money which is available.

MR. BELYEA: The hon. Paul Martin indicated the money was available only for health purposes. I do not believe Doctor Katz has the authority --

MR. MACAULAY, Q.C.: I know he has not. I wanted somebody to admit it. The money is not available; we all know that.

MR. NEWBURY: I think it is.

THE CHAIRMAN: Hon. Mr. Martin said it was just for one purpose.

MR. BELYEA: For health purposes.

MR. BRONSTEIN: I believe some eighteen months ago, my understanding is that the hon. Paul Martin spoke on it and the matter was relegated to the individual provinces, and comes under their jurisdiction.

MR. NEWBURY: Doctor Katz has worked in Edmonton and Vancouver, and he got the money to work with. I do not know where he got the money.

THE CHAIRMAN: Perhaps I could answer that question. The Committee did have an audience with hon. Paul Martin in Ottawa, and the hon. Minister indicated to the Committee that money would be forthcoming from the Dominion Government on specific requests, to aid with air pollution, and he gave us his assurance of the



co-operation of the Federal government in the matter.

MR. BRONSTEIN: That the money would be forthcoming to the provincial legislatures, or individuals?

THE CHAIRMAN: Through the provinces.

MR. BRONSTEIN: Not upon any individual application?

THE CHAIRMAN: No, through the provinces.

MR. MACAULAY, Q.C.: That is a plan for the future?

MR. ELLIOTT: Mr. Chairman, through Mr. Newbury, the Manufacturers' Association has done some research work in Sarnia, and are now doing some work in Hamilton.

MR. NEWBURY: Yes.

MR. ELLIOTT: Did you get a grant, outside of the Manufacturers' Association?

MR. NEWBURY: In Sarnia, we got it from the province.

MR. ELLIOTT: Not from the Dominion Government?

MR. NEWBURY: No.

MR. ELLIOTT: Nor any grant for Hamilton?

MR. NEWBURY: No.

MR. ELLIOTT: In Hamilton, the Manufacturers' Association is doing the whole deal.

MR. NEWBURY: Yes.





MR. MACAULAY, Q.C.: These grants are given to each council, and each council has the right to spend it on whatever it likes. Is that so?

MR. NEWBURY: No. The original survey was put through by the now defunct Ontario Research Council, and there was a lack of any knowledge or equipment dealing with air pollution, and the Foundation was asked to set up a laboratory, which the province has backed, and one was set up in Sarnia, and we agreed to undertake this survey, and they agreed to pay one half of the cost, if the provincial government would agree to pay the other half.

MR. MACAULAY, Q.C.: Has the provincial government paid one half of the cost of this specific thing, or one half of the cost to the Council itself? Did they just hand it out? Is there a direct amount in the provincial budget for this Sarnia air pollution matter?

MR. NEWBURY: I think, since the wind-up of the Research Council of Ontario, that sum of money has lost its identity in that the provincial government has now included in the Foundation finances to the extent they made available to Sarnia.

THE CHAIRMAN: I would like the people here to know this -- and I am sure I am speaking for the



Committee members, when I say that we were very much impressed with the attitude of the Federal authorities in the matter of air pollution, and we feel they are going to give us their co-operation.

MR. MACAULAY, Q.C.: And some money?

THE CHAIRMAN: Yes.

MR. ELLIOTT: I think a great deal of congratulations are due to the Canadian Manufacturers' Association, because they are going ahead in Hamilton at their own expense, in an effort to help us. I feel they have co-operated with us in every way they can.

Mr. Fisher is here from The Steel Company of Canada, and I feel they have given us every co-operation, when they have "gone out on a limb" and spent their own money to do this research work, and it is to their credit, and they should be given credit for that, if for nothing else.

BY THE CHAIRMAN:

Q. Will you proceed, Mr. Bernard?

A. Yes, Mr. Chairman. This goes on:

" On October 3rd, 1956, your Chairman, Mr. Alfred H. Cowling, addressed a meeting of the Association's Special Committee on Atmospheric Pollution and posed a number of questions, the answers to which, he indicated, would be of



assistance to the Select Committee.

The Association, in this Submission, repeats these questions and comments in respect to them.

1. QUESTION:

Representations which have been made to the Select Committee on Air Pollution and Smoke Control have been overwhelmingly in favour of removing all exemptions from air pollution control legislation in Ontario, so that all industries will be treated equally and fairly under provincial law and the municipal by-laws which are authorized by the provincial law.

Would the Canadian Manufacturers' Association approve of all industries being treated alike and in the same way by provincial legislation and municipal by-laws?

ANSWER:

No. While the Association agrees that exemptions are an anomaly, nevertheless, certain industries at present exempted cannot be made to meet restrictive legislation without facing serious and perhaps critical economic loss. Therefore, any legislation enacted should provide for the setting up of a suitably qualified enforcement agency familiar with the





problems of these industries. The agency in question should be given, under legislation, power to exercise its discretion in regard to this particular matter. In the interest of uniformity between different areas, such discretionary power must, in our view, be exercised at the provincial level.

2. QUESTION:

Many world authorities on air pollution control have informed my Committee that it is not unreasonable for the average industry to spend between 2% and 5% of its capital cost for air pollution control equipment; they have also stated that in rare cases where the problem is unusually difficult, this cost for air pollution control might rise as high as 20% of the company's capital cost.

Would the Canadian Manufacturers' Association endorse these figures as being reasonable?

ANSWER:

The Association is not in a position to express an opinion as to the validity of these suggested percentages of capital cost. It does point out, however, that in its view, there is no such thing as an 'average industry'.



The nature of the product of any affected industry will determine the type and extent of the control equipment required to remedy a situation. While 2% of capital cost might, in a few instances, be considered as being a reasonable figure, there would undoubtedly be a wide variation in such expenditures. It is contemplated that, in some cases, an expenditure representing 50% or more of capital cost might be required.

In many cases annual maintenance costs might well exceed capital outlay. Equipment regarded as necessary for air pollution control could be an integral part of the production process of an industry; on the other hand, it might represent a method for waste recovery of no economic value. Air pollution control equipment is difficult to define in relation to other equipment. We submit that it would be impractical to set any standards based on a percentage of capital costs."

BY THE CHAIRMAN:

Q. Mr. Bernard, just on that point: maybe some of our industrial experts here could make a comment on this particular statement that:





"air pollution control equipment is difficult to define in relation to other equipment. We submit that it would be impractical to set any standards based on a percentage of capital costs."

In our studies to date, I think the Committee will agree that, by and large, we have seen and heard of equipment to control air pollution and smoke, which can be reasonably applied by almost any industry.

Perhaps some of your members would like to comment on that.

THE WITNESS: Perhaps Mr. Jones would like to comment on that.

MR. JONES: The only thing I might add is this; that the equipment you might use to control SO<sub>2</sub> might be rather expensive in the sulphite and paper industry or smelters, but you cannot use it in connection with the losses from a cement plant, for instance, whereby you can recover such losses from stacks, as a salable product.

In a sulphite mill, you cannot possibly recover anything which would be worth anything to you.

When you speak about a definite standard based on a percentage of capital costs, we might suggest, for instance, 3 percent. in a paper mill. The capital cost of a modern paper mill might be as much



as \$60 million, and 3 percent. of that would be \$1,800,000, which is completely out of the question, in my estimation. There is practically no nuisance from a newsprint paper mill.

On the other hand, there are pollutants from a Kraft mill which might require money to control. I think I will agree with you in regard to the equipment you might put into a Kraft mill, but not to control other industry.

MR. MACAULAY, Q.C.: What would you say about a brick-making company, which has not spent anything at all? Do you not think they should spend something to recover these air pollutants?

MR. JONES: I do not know anything about a brick company. But people are becoming unduly concerned at times, as was said earlier in the report, about air pollution which might not be injurious to health at all. There might be a bad odour occasionally, but it is not bad for health.

MR. MACAULAY, Q.C.: Then you have nothing to say about a brick company which, as you know, has a certain amount of furnaces, and is creating a great quantity of black smoke.

What is your connection with this Association?

MR. JONES: Just a member.



MR. MACAULAY, Q.C.: Then the question is not fair. You are right about the pulp and paper industry. Has Mr. Bernard any comment to make on that?

MR. MacRAE: Mr. Sanderson, would you care to make any comment, as a brick manufacturer?

MR. SANDERSON: We manufacture bricks.

MR. MACAULAY, Q.C.: What company do you represent?

MR. SANDERSON: Toronto Brick Company.

THE CHAIRMAN: Where is your place of business?

MR. SANDERSON: We have a place on Greenwood Avenue, and we have two or three other situations where the only problem is the odour, which is very small, in comparison to the manufacture of brick.

In making shale brick, we have to have a reduced atmosphere, which means we have not enough air to make complete combustion, hence we make smoke. We have endeavoured at all times to deal with the reduced atmosphere so we will not have smoke, except during the periods when it is necessary.

We consulted with a firm which <sup>was</sup> recommended to us, but due to the fact that we have hundreds of furnaces -- about 24 in each kiln -- the problem is very difficult.





However, we are spending a certain sum of money in an endeavour to work out a plan, and we expect by next year in our Don Valley plant -- which is the largest one -- we will be using equipment whereby we can still have the reduced conditions in the firing zone, to enable us to turn it off in other places, so perhaps we will not be making any smoke at all.

THE CHAIRMAN: I am glad to hear you say that, because, quite frankly, I think we have had more local complaints about your business than all the rest of the industry put together, but you have big, broad shoulders, and it does not bother you.

I think your Company is exempt under the provincial law?

MR. SANDERSON: Yes.

THE CHAIRMAN: Why were they exempted in the first place?

MR. SANDERSON: On account of a basic difficulty. There are certain phases in the burning at certain temperatures where you have to have reduced atmosphere to get the type of wares you hope to get, and you make certain amounts of smoke during that burning.

MR. MACAULAY, Q.C.: You purposely reduce the amount of oxygen?



MR. SANDERSON: We have to do that, to get the material available to the public.

MR. MACAULAY, Q.C.: Was your exemption partially upon representations made by your Company? Did your Company request it be exempted?

MR. SANDERSON: I would presume so. It was a good many years before I came with the Company.

MR. MACAULAY, Q.C.: I think it was 1949, when it came before the city of Toronto.

MR. SANDERSON: It goes back before that.

THE WITNESS: It has been in the Municipal Act for longer than I know of.

MR. MACAULAY, Q.C.: But, in 1949, there was some discussion as to whether or not the municipality of Toronto should be given power to exclude brick companies.

At that time, other representations were made to the city of Toronto, and they decided to leave out of its powers, the power to deal with brick companies.

THE CHAIRMAN: There is one problem with which this Committee has to deal, and no doubt Mr. Sanderson is familiar with it.

Most industries are not exempt, but there are certain controls exercised, and I would like to ask





why, in your opinion, should there be certain industries without control?

Will that not make an over-all reasonable smoke programme rather difficult, if we do not have everybody operating under one law?

MR. SANDERSON: I think the thought behind the answer to the query is that it might come in time, but it would take some years to do it.

MR. MACAULAY, Q.C.: Just for example, Mr. Sanderson, how much did your Company spend last year on what we call "air pollution" in your Don Valley plant, and of what did it consist?

MR. SANDERSON: There is no money spent on these changes.

MR. MACAULAY, Q.C.: Then the answer is "nothing"?

MR. SANDERSON: That is right.

MR. MACAULAY, Q.C.: I am told you could instal equipment for approximately the value of \$50,000, and cure it. Is that so, or is that simply nonsense?

MR. SANDERSON: I think it is a lot of nonsense.

THE CHAIRMAN: These are the kind of answers which are valuable to the Committee.

MR. MACAULAY, Q.C.: What would it cost you



to eradicate the problem? You say you are going to do something next year. What are you going to do next year?

MR. SANDERSON: It is essential we have a new burning plant. We expect to spend about \$140,000.

MR. MACAULAY, Q.C.: But the basic reason you are doing that is to provide a better product?

MR. SANDERSON: There are three things the more controlled the product is, the more we will get away from the smoke problem. That is where most of the money is going.

MR. MACAULAY, Q.C.: Would you make the change, if the only result was you would get a better product, or would you make the change if the only result was to get less smoke?

MR. SANDERSON: I think it is a combination of the two.

THE CHAIRMAN: Mr. Sanderson, you feel, as far as the brick manufacturers are concerned, they would be prepared to come under the over-all new law, provided they were given a reasonable time to make the necessary adjustments?

MR. SANDERSON: It all depends on the meaning of the term "reasonable".

THE CHAIRMAN: You used that term a great



deal in your report, and that is why I am using it. You are not asking to be exempted indefinitely, and all others industries not?

MR. SANDERSON: No. As I say, if we were building a new plant today, we would built it and operate it without the present problem, which occurs with us periodically.

MR. NEWBURY: I think Mr. Sanderson has pointed out very much of what we were trying to say in this answer. If Mr. Sanderson spent \$1 million to rebuild half his plant, and you ask him how much was spent on air pollution, and how much of the million dollars was spent in providing a better product, and how much was spent on cutting down smoke, I think his answer would be that it would be very difficult for him to say accurately what the capital cost of equipment for the air-pollution control is, and what the cost for providing a better product is, and I do not see how he could give the percentages.

MR. MACAULAY, Q.C.: What new equipment are you going to instal?

MR. NEWBURY: It is a new type of equipment.

MR. MACAULAY, Q.C.: It is not to prevent smoke; it is for making a better product.

MR. NEWBURY: Not only for making a better





product. If you spend a couple of million dollars in order to use diesels instead of coal-fired engines, you can eliminate the smoke, of course, but to give the proportion of that couple of million dollars spent on air pollution control is rather difficult. To simply say it is "2 percent." or "5 percent." is absolutely meaningless.

MR. ELLIOTT: Would it be 50 percent., if they have to change their methods?

MR. MACAULAY, Q.C.: They cannot, because it is not air pollution equipment.

MR. ELLIOTT: If it answers the question of air pollution, what is the difference?

MR. BRONSTEIN: I think, Mr. Chairman, we are all in agreement there should be one piece of legislation which governs all brick manufacturers, and when that is drawn up -- and some day soon, I hope -- and I think Mr. Sanderson has been quite honest here in telling us what his problem is, and with the restricted banking practices in force today, there is considerable difficulty in financing alterations and changes.

Now, when the legislation is passed, there is no question but what it should apply to all future brick plants, but our problem now is with those which



are in existence today, and are exempt under the old legislation.

These old plants, in my opinion, should be assisted by the provincial industrial bank, whose practice is to assist industry --

MR. MACAULAY, Q.C.: The provincial industrial bank?

MR. BRONSTEIN: Yes, I think that is the title. There is a bank in the province where you go to make a loan. There should be a tie-in between the two. For instance, in connection with a brick plant, they might want to make certain improvements, but they simply have not the money.

MR. THOMAS (Oshawa): Is that not the development bank?

MR. MACAULAY, Q.C.: You do not mean the Industrial Development Bank?

MR. BRONSTEIN: Is that provincial?

MR. MACAULAY, Q.C.: No, it is Federal.

MR. BRONSTEIN: Such a bank should be given power to assist industries of this type.

MR. MACAULAY, Q.C.: That really is not the answer -- with great respect. The real thing is that it has to be paid back no matter from where it comes, and we have Mr. Sanderson's statement that





money was not being spent up until now, but that the banking laws have been tightened up, he may have a little difficulty, but yet my constituents have been screaming for help. I am not impressed with the banking regulations. The money has to be paid back, and the reason industry does not want to spend it, is because they must pay it back.

BY THE CHAIRMAN:

Q. Mr. Bernard, will you please continue ?

A. Yes, Mr. Chairman. Proceeding now with Question No. 3:

"3. QUESTION:

Is the Canadian Manufacturers' Association aware of any instances where an Ontario industry has been prejudiced in its operations by being required to install adequate air pollution control equipment? Is the Committee aware of any industry outside the province of Ontario which was so prejudiced in its operations by air pollution control legislation that it was forced to change its factory site?

ANSWER:

The question refers to 'adequate' air pollution equipment. "adequate" is a term which requires definition. The Association has not



received any official notification of any situations prejudicial to industrial operation arising out of legislation requiring the installation of atmospheric pollution control equipment. There have been, however, instances of hardship experienced as the result of litigation arising from actions under the common law, and possibly as the result of enforcement of municipal by-laws. The Select Committee has no doubt had such cases drawn to its attention during the hearings it has held over the past two years.

With regard to the second part of the question, the Association understands that there have been cases of industries having been forced to relocate, principally in the United States, although details are not available. It is not aware that there have been any such cases in Ontario."

MR. THOMAS (Oshawa): I may say, in respect to that statement, that in our travels, we never came across one instance where industry was compelled to re-locate because of the restrictions in that area.

MR. NEWBURY: There is one in Los Angeles, in a power situation --



MR. THOMAS (Oshawa): We were told there were none.

MR. MACAULAY, Q.C.: That is not quite right. I do not mean to suggest you have misinterpreted this. We spoke to the head of one of the air pollution associations in the United States, in New York city, and he told us about -- was it in a power house --

MR. NEWBURY: I think it was the Consolidated Power situation.

MR. MACAULAY, Q.C.: A \$60 million power situation.

MR. NEWBURY: Yes, but not operating.

MR. MACAULAY, Q.C.: There was some explanation for that.

MR. NEWBURY: It was built to utilize low-grade fuel with a high sulphur content, and the air pollution people will not allow them to operate with low-sulphur fuel, and the people say they cannot afford to change.

MR. MACAULAY, Q.C.: It will be a change-over next year.

THE CHAIRMAN: And they are also conducting experiments at the New York University, which we saw.

MR. NEWBURY: It is a power situation.  
I think<sup>if</sup> they knew this was going to happen, they





certainly would not have built. In fact, they have looked into the possibility of moving, rather than carry out the change.

MR. MACAULAY, Q.C.: According to the information we have, they will be able to give an answer as to re-location.

THE CHAIRMAN: Will you carry on, Mr. Bernard?

THE WITNESS: Yes, Mr. Chairman.

" The Association submits that restrictive legislation without safeguards designed to meet particular situations undoubtedly would result, in many cases, in severe hardship. In this connection, we would draw your attention to the fact that certain industries, for example, those whose products are very largely exported, originally located in Ontario because of the low power cost situation and a favourable labor market. These factors have changed. Should these industries be compelled, as the result of restrictive legislation of an all-embracing nature, to undertake large capital expenditures, they might have to consider whether it would be economically advantageous to remain in Ontario or to relocate elsewhere."

THE CHAIRMAN: Mr. Bernard, do you think



that these factors have changed the low-power cost and the favourable labour market?

THE WITNESS: I think chiefly the low-power cost. Like everything else, power costs have gone up.

BY THE CHAIRMAN:

Q. What about labour?

BY MR. MACAULAY, Q.C.:

Q. Are the power costs elsewhere more favourable?

MR. MacRAE: May I ask Mr. Gregory to enlarge on that? This is a specific problem in Niagara Falls.

MR. GREGORY: Thank you, Mr. MacRae.

Mr. Chairman, this paragraph was put in to point out the need for a change to become familiar with industry's problem to extend the air pollution required. That refers to an artificial change in principle to industries whose products are very largely exported.

If we want to enlarge, we have to import our crudes, and a certain portion of that is treated elsewhere and brought back into Canada, and is bonded and coded.

THE CHAIRMAN: Do you feel that the power situation and the labour situation are changing?

MR. GREGORY: Yes, definitely. I have heard that power can be obtained more economically in





some parts of the States.

THE CHAIRMAN: That is quite a statement to make, because we always felt that Ontario was a leader in low-cost power. This is the first time we have heard a statement like that.

MR. GREGORY: I am only quoting hearsay --

MR. MacRAE: I think we can quote the Tennessee Valley Authority, where they get electricity, even when they do not need it.

MR. MACAULAY, Q.C.: There are, of course, optimum places throughout the world where you can get one thing cheaper than any place else, but let us not hold that up as a standard which can be maintained throughout the world. I do not think that Tennessee can be taken as a criterion for the whole country.

MR. MacRAE: We have heard of a pipe line to the east which will arrive next year, and that will provide Alberta oil.

THE CHAIRMAN: I was thinking about two particular things. That is why I was asking you the question I did. The low-cost power, other than Tennessee, applies -- you do not know of any place where the power cost is lower than in Ontario?

MR. GREGORY: I think there is one other.



THE CHAIRMAN: Would you care to tell us where it is?

MR. GREGORY: I heard it is on the south side of Lake Ontario, and coming into Ontario.

MR. MACAULAY, Q.C.: Coming or will come?

MR. GREGORY: Coming.

MR. MACAULAY, Q.C.: So it is not now cheaper?

MR. GREGORY: Perhaps not.

THE CHAIRMAN: What about the labour market? How is it changing -- for our information?

MR. GREGORY: The labour market is very relative. It varies more than the power. I think there are certain areas in Canada where the labour varies considerably.

THE CHAIRMAN: The only reason I raised the question is because, to me, that is quite a statement to say that the low-power-cost situation and a favourable labour market could necessitate industry moving out of Ontario.

MR. GREGORY: No, that is not what the statement means. It appeared that way, in the beginning.

THE CHAIRMAN: But due to changes, they are not moving out?



MR. GREGORY: No, it points out the need for changes. I would like to enlarge on that a bit more. In this particular industry, there is not only a section of our plant, but I think you would have to re-design our entire building for us.

MR. MACAULAY, Q.C.: Let us stay on this one statement you have made. You say:

"We would draw your attention to the fact that certain industries, for example, those whose products are very largely exported, originally located in Ontario because of the low power cost situation and a favourable labor market."

You are, therefore, saying that the low-power-cost situation does not exist in Ontario any more, comparatively speaking? "Yes" or "No"?

MR. GREGORY: Yes.

MR. MACAULAY, Q.C.: You say that there is no longer a favourable labour market in Ontario? Is that correct?

MR. GREGORY: That is correct.

MR. MACAULAY, Q.C.: Well, you are entitled to say what you want.

MR. WISHART: Is there anything which says the labour costs in the Maritimes are competitive with





Ontario?

MR. MACAULAY, Q.C.: No.

BY THE CHAIRMAN:

Q. Will you continue, please, Mr. Bernard?

A. Yes, Question No. 4 reads:

"4. QUESTION:

Would the Association recommend any method for the education of industry and its management regarding the advantages of making known to the public in the vicinity what the industry is trying to accomplish, what it has done to achieve this object, and what it proposes to do in the future?

ANSWER:

Industries with a sense of public welfare, will initiate, and are initiating pollution control. The public, generally, reacts favourably to any effort which is sincerely made to tell what the problem facing an industry is and what it is attempting to do to find a solution. Nothing but good could result from a programme of public relations having these objectives.

Related to this are the co-operative research programmes of pollution control maintained



by industry in co-operation with the Ontario Research Foundation, now in effect in such centres as Hamilton and Sarnia. The effectiveness of these has been clearly demonstrated. They have, because of the wide publicity which has been given to them, aroused public awareness in their localities of the steps which industry is taking for the good of the community. Programmes similar to these should be encouraged by the government."

BY MR. MACAULAY, Q.C.:

Q. What is your position or policy in relation to the participation by industry itself in these programmes, as you refer to them, Mr. Bernard?

A. Well, let us consider Hamilton, for instance. This programme was initiated by the Hamilton Branch of the Association under which they have set up control stations to measure, and so on, to find out to what extent they are offending.

As a result of that, and a report which was made by the industries themselves, they will decide what steps will be taken. Until they have some accurate information as to what pollution is, and what is needed, I do not see how they can take remedial measures, until they are satisfied, and that





is the first stage in their programme.

MR. MACAULAY, Q.C.: The question I asked was on the relative interest in one of these programmes, Let us consider, for instance, the town of Oshawa, the city of Barrie and the city of Windsor; what is the role industry itself has to play? What role do you see for industry in attempting to deal with this situation?

THE WITNESS: It is a voluntary attempt on the part of industry to do something about it.

BY MR. MACAULAY, Q.C.:

Q. Do you think they will have any obligation to do something about it?

A. That is a hard question to answer. Perhaps Mr. Fisher, who is so familiar with the Hamilton situation, could tell us what happened.

Q. I am happy to have you "pass the buck" around the room. Who will answer the question? You are a senior man, and learned in this situation. Do you feel that industry, composing your Association, has any responsibility on its own, to clear up air pollution?

A. Yes, I think so. I thought you might want some more information.

MR. MACAULAY, Q.C.: I am not interested in



data so much as I am in principle.

THE CHAIRMAN: Mr. Fisher, would you care to say anything?

MR. FISHER: Industry in Hamilton has felt the responsibility regarding air pollution control, and they have taken the initiative to determine how serious the situation is, with a view ultimately of doing what they can to control the air pollution. We feel a very definite responsibility in that regard. We feel that industry, being the source of so much of the pollution, should take all steps for controlling it, as may be necessary.

But, first of all, we have to determine what measures will be necessary, and then what steps will be necessary.

MR. MACAULAY, Q.C.: I agree. I think you are doing a wonderful thing, and I am sorry that the same sense of responsibility is not apparently felt in Toronto.

How much money did you receive from the Federal government, or Doctor Katz, and how much will your programme cost you, and over what period of time will it take to carry it out?

MR. FISHER: It is entirely made up of contributions on the part of industry itself, through



the Hamilton Branch of the Canadian Manufacturers' Association.

MR. MACAULAY, Q.C.: How much?

MR. FISHER: I believe somewhere around \$100,000.

MR. MACAULAY, Q.C.: How much have you received by way of aid from Doctor Katz?

MR. FISHER: Not any, as far as I know.

MR. ELLIOTT: They have taken steps to discipline some of the industries themselves.

MR. FISHER: We are concerned with industry doing what it can.

MR. ELLIOTT: I have information that the engineers of the plants in Hamilton have been called upon by the Smoke Abatement Officer to see that they are not making unnecessary pollution.

MR. FISHER: We feel this co-operation amongst industry in Hamilton has indicated it is willing to co-operate, and when a situation becomes apparent to us, we communicate with the industry involved, and by simply calling it to their attention, some remedial action is taken.

THE CHAIRMAN: Do you receive any co-operation from those industries in Hamilton which are not compelled to co-operate, under the present law?





MR. FISHER: We are one of the industries which is not compelled under the present law, but we have been one of the prime movers in this situation. We have taken certain steps to control the pollution in our own plant.

MR. MACAULAY, Q.C.: Of the \$100,000. which has been raised, how many companies have contributed, a few or a great many, and what is the average contribution?

MR. FISHER: I am afraid I cannot give you that information. It is not available to me. Possibly Mr. Newbury knows more about that than I.

MR. NEWBURY: There are about 60 industries contributing. When they were asked to contribute, they were asked to contribute according to the number of employees, and the type of industry. Whether the firm actually contributes that amount or just an off-the-cuff sum, I do not know.

MR. MACAULAY, Q.C.: So, Mr. Fisher, what has taken place in Hamilton is from the point of view of research? You have not set up any body of your own to govern your own members, or even those who are contributing to the project? It is strictly a question of research at this moment?

MR. FISHER: That is right.



THE CHAIRMAN: Thank you very much, Mr. Fisher.

MR. MacRAE: This co-operative project originated in Sarnia at the request of the three major industries there, the Dow Chemical, the Polymer Corporation, and the Imperial Oil.

I think that was the first attempt on this continent, outside of Hamilton, in which a co-operative effort has been developed, with a government agency, to abate pollution.

I am speaking for industry, in regard to both water and air pollution, when I say that in the last four years, they have spent about \$4½ million.

MR. MACAULAY, Q.C.: By whom has that been spent?

MR. MacRAE: The industry in the Sarnia area -- the major industries.

MR. MACAULAY, Q.C.: What proportion has been spent in regard to water pollution?

MR. MacRAE: Do not quote me on this --

THE CHAIRMAN: Just approximately, Mr. MacRae.

MR. MacRAE: Approximately 75 percent.

MR. MACAULAY, Q.C.: Is any of that because of orders of the International Joint Commission, with respect to the pollution of international waters?



MR. MacRAE: Yes.

MR. MACAULAY, Q.C.: So a great deal of the money which has been spent has been spent because they have been required to spend it, under the regulations?

MR. MacRAE: That is correct, and we gave all our information to the International Joint Commission with respect to air pollution.

You will remember that in the city of Windsor, the International Joint Commission set up two bodies, one in Windsor, and one in Detroit. The Windsor people have been spending \$50,000 a year of Federal money. We are spending our own money in Sarnia, plus the contribution from the governmental Research Foundation.

MR. ELLIOTT: We visited Sarnia last fall, and in the industrial plants, they were doing all they could in their own way to eliminate air pollution. Yet the city of Sarnia was not doing anything; they were shoving it into the river holus bolus.

MR. MORNINGSTAR: That is a very serious matter.

BY THE CHAIRMAN:

Q. Will you continue, Mr. Bernard?

A. Yes.





"Would the Canadian Manufacturers' Association recommend that a government agency, for example, a division of the Ontario Department of Health, established with technically qualified personnel and adequate scientific equipment, be made available for consultation and to make scientific studies for any particular industry or municipality requesting assistance and advice on its air pollution control problems?

ANSWER:

The Association strongly recommends that such a government agency be provided for in any proposed legislation, as part of the enforcement and advisory machinery. An agency of this nature should have at its disposal adequate research facilities and scientific equipment and be staffed by fully qualified scientific and technical personnel. In this connection the Ontario Research Foundation which has considerable knowledge of this subject, might be prepared to undertake basic research into the problem."

MR. MACAULAY, Q.C.: Has not the Ontario Research Foundation been retained by your Association in regard to this matter?



THE WITNESS: Not in regard to this matter, but in regard to the Sarnia and Hamilton situations.

BY MR. MACAULAY, Q.C.:

Q. May I also ask you this? How many members are there in your Association? I know the importance of your Association, and I know the tremendous job you have done. I am interested in knowing, if I can, the representative aspect of it.

How many members does the Ontario Manufacturers' Association have?

A. 3,220. I mentioned that at the very start.

Q. That is, membership in the Ontario Association?

A. Yes, one-half of the total of Canada.

Q. Of the 3,220, what would be a sample unit?

A. Six employees in the manufacturing end.

Q. What about processing? Is that not manufacturing?

A. It could be.

Q. What about the reclamation of metals?

A. Yes, I would say they are eligible for membership.

Q. So, six months of over-all manufacturing, and the rather broad interpretation of "manufacturer"?

A. Yes.



Q. How many manufacturers, on this six-employees basis, would there be in Ontario? You have 3,220 units in Ontario which belong to your Association?

A. Yes.

Q. How many units in Ontario would be either employing six people or more in the manufacturing business?

A. That is a very difficult question to answer, Mr. Chairman, for this reason: you consider the Workmen's Compensation Board, which covers 16,000 or 17,000, whom we will say are manufacturing within that coverage, under clauses 1 to 17, yet it would be awfully difficult to say that those were eligible for membership in the Canadian Manufacturers' Association.

We consider that it is somewhere in the neighbourhood of 70 percent. of the firms which are eligible within the meaning of the terms for eligibility for membership in the Association.

We get all kinds of manufacturers for statistical information.

Q. How much would the Steel Company of Canada, for instance, pay?

A. I think that is a confidential matter. I would not care to answer that question.

BY MR. THOMAS (Oshawa):

Q. Would the per capita be uniform?





A. No, it goes from a very small amount --

Q. There is no per capita fee?

A. It is based on the number of employees.

Q. Would it be uniform?

A. No.

MR. MURDOCH: Actually it is quite voluntary.  
It could go higher or lower.

BY MR. MACAULAY, Q.C.:

Q. If I had six employees, and I was paying one dollar each, that would be six dollars, and if I had twelve men, would it be twelve dollars?

A. It is by classes, six to ten; ten to twenty, and so forth. It actually becomes less, the more you have. Otherwise, it would reach an astronomical figure.

BY THE CHAIRMAN:

Q. W Will you proceed, Mr. Bernard?

A. Beginning with the second paragraph on page six, it says:

"The Association draws the attention of the Select Committee to the dearth of scientists and technologists specializing in the field of atmospheric pollution. If such an agency is to be established, no time should be lost in recruiting such personnel. Looking to the



future, the Government might consider the granting of scholarships and the establishment of fellowships for post-graduate work at appropriate universities as an encouragement to those who might find in such work a rewarding and satisfying career."

BY MR. MACAULAY, Q.C.:

Q. If the government was to do that, do you think industry would assist in these scholarships?

A. I do not think that is envisaged in this particular answer.

Q. I appreciate that. It is obvious you are all well qualified for your jobs. I think, in addition, you should be lawyers or politicians.

I never heard any fellows who could "stick handle" their way through these questions better than you. You are terrific.

THE CHAIRMAN: He said you should be either a lawyer or a politician.

Will you continue, Mr. Bernard?

THE WITNESS: Yes, Mr. Chairman.

"6. QUESTION:

Should this assistance be free to the industry and paid for by the taxpayer? Or should some charge be made to the industry,



either to cover the actual cost involved or a part of the cost?

ANSWER:

Initial consultative assistance by the Government agency should be made available without charge. This might be considered as a diagnostic service. Depending on the nature and extent of the problem uncovered, appropriate charges might be made for further assistance by mutual agreement.

7. QUESTION:

Does the Association believe that every industry which installs air pollution control equipment should be given some special financial assistance or consideration for the cost involved? What form should this consideration take: some tax relief? The use of interest-free loans? Or are there any other suggestions?

ANSWER:

Historically, industry has demonstrated that it prefers to stand on its own feet. However, there undoubtedly will be cases where some classes of industry would be unable to stand the cost of the installation of expensive





pollution equipment and therefore financial assistance in some form might be required.

Where applicable, low-interest long-term loans might be made available, similar to those which, we understand, are made to municipalities and industries under the provisions of the Water Resources Commission Act.

8. QUESTION:

If every industry should not receive some financial assistance from the Government, would you recommend that only those industries which must install an abnormally expensive air pollution control system receive some financial assistance? If so, in excess of what percentage of the industry's capital cost should the air pollution control equipment expense be for the industry to qualify for the assistance?

It is possible that any particular industry should be able to bear air pollution control expense up to 5% of its capital cost, but beyond that amount it should be able to qualify for some special consideration and financial help.

ANSWER:

The answer to this, we suggest, is covered



by the answers to 2 and 7.

9. QUESTION:

For those industries which are not willing to co-operate in an air pollution control programme, what penalties would the Canadian Manufacturers' Association recommend?

The Vice-President of one of the large Ontario manufacturing companies stated that he thought the following scale of fines would be desirable and adequate:

\$100 for the first offence,

\$300 for the second offence,

\$500 for the third, and subsequent offences.

Would the Association agree with this scale of fines? Could the Committee suggest some method of dealing with an offender who continuously pollutes the atmosphere?

ANSWER:

In respect to air pollution, prosecution should only be the last resort. The Association has no observation to make on the subject of penalties."

BY MR. MACAULAY, Q.C.:

Q. What about the latter part of the question:  
"Could the Committee suggest some method of



of dealing with an offender who continuously pollutes the atmosphere?"

Has the Association any comment to make on that?

A. No. It is hard to be specific on a question of that nature. I think we have answered it in part, in summing up, for clearing up the situation.

MR. MACAULAY, Q.C.: Very nicely put, Mr. Bernard.

THE CHAIRMAN: Please continue.

THE WITNESS: The brief goes on:

"10. QUESTION:

For those few industries which face very difficult problems, should the industry be required to make a report to the Government and to the Canadian Manufacturers' Association showing the amount which has been spent and indicating what progress has been made since its previous report? Should these reports be yearly or at some other interval, for example, every six months?

ANSWER:

The Association's Submission is based on its considered opinion that any legislation





which may emerge, must be supported by a competent enforcement agency. This being the case, it is reasonable to expect that industries which face particularly difficult problems should have access at all times to such an agency, which in turn would be expected to deal with these industries in a helpful and understanding manner. If this principle is observed, there should be no need for statutory provisions involving inspection and the rendering of reports. Examination of the Alkali Act of Great Britain will, we suggest, reveal interesting examples of how matters of this nature are dealt with there.

11. QUESTION:

Would the Canadian Manufacturers' Association make recommendations concerning the control of air pollution from new industry locating in the province? Would it recommend that every new plant be required to plan to install adequate air pollution control equipment before it is permitted to start construction?

ANSWER:

Under Section 13 of the Factory,



Shop and Office Building Act, provision is made for the submission by industry of specifications for new structures or alterations, to the Department of Labour for approval.

It would be advantageous for any new industry, which might, by the nature of its operations, give rise to pollution problems, to be required to discuss with the enforcement agency such questions as standards of emission, sites and the assessment of local conditions. This would ensure that all reasonable requirements for good control, having particularly in mind atmospheric and environmental conditions, would be met.

12. QUESTION:

Does the Canadian Manufacturers' Association believe that each municipality should have the power to cause the abatement of air pollution originating from railways and steamships operating within its boundaries?

ANSWER:

The Association feels that this question is beyond the scope of its observations; however, it does offer the following comments:



The federal government is, we understand, revising the Shipping Act and the Railway Act of 1908 to conform with present-day conditions. In respect to the railways, the federal authorities have recently completed discussions in respect to regulations covering all municipalities in Canada. These new regulations will provide a maximum time for starting coaled fires and also for smoke emissions while in operation. At the present time the railways are over 50% converted to diesel power and the problem of steam locomotives will be a declining one. In respect to steamships, the same situation will apply, that is, municipalities and harbour boards may apply the clauses of the amended Shipping Act in their vicinity.

In conclusion, the Association submits, with respect, the following observations:

1. Medical science is becoming conscious of the possible effect of pollutants on the health of the public. The Association is, therefore, of the opinion that it is advisable to set up a mechanism for the control of pollutants before public apprehension results





in a demand for hasty, and consequently perhaps ill-advised action.

2. Pollution control can only be effective when it is based on legislation. Such legislation must, by the nature of the situation it seeks to control, be restrictive. However, to be workable, it must be characterized by safeguards which, if not provided, can cause great hardship to an industry and result in such a degree of economic loss that it may be rendered incapable of supporting those Ontario citizens which it employs. The danger of bureaucratic control exercised by a literal application of a restriction embodied in such legislation, to a situation involving an apparent or possible hazard which is not scientifically supported, must be carefully guarded against.

3. Such legislation must, therefore, provide for the establishment of a commission or agency which has at its command the best possible sources of advice, whether embodied in the composition of the agency or available to it in the form of a properly constituted advisory body. An agency of this nature



must also have as an integral part of its structure, or available to it in its composition or in its advisory body, the best possible facilities for conducting continuous research into all aspects of pollution."

BY MR. MACAULAY, Q.C.:

Q. Mr. Bernard, may I ask you this: I should judge, from what you have said so far, Mr. Bernard, that the basis upon which you make that statement is you want to be satisfied that the pollutant in the air is causing injury to health?

A. That is right.

Q. You are not really concerned about the odours, or the things which makes one's eyes sting, unless it is proved it is injurious to health?

A. No. I would not go so far as to say that. I would consider, if you have your eyes irritated, it was injurious to health.

Q. You would accept that as a health matter?

A. Yes.

Q. What about fly ash? It is not desired in any neighbourhood in which it settles, but is it injurious to health?

A. I am not a medical man and I think that is what we are talking about.



Q. Assuming that you are saying it should be proven it is actually injurious to health; unless you can establish it is injurious to health, there is no reason to stop it from being there?

A. No, I do not think we said that.

MR. NEWBURY: No. I think Mr. Macaulay is mis-reading the brief. I do not think we have said that.

MR. MACAULAY, Q.C.: No, do not misunderstand me. I did not say you said it. I said I rather assumed, from the emphasis which was placed on it, particularly by Mr. Jones and others, in its phraseology, the emphasis was on the word "health". I assume that sulphur, while it may be inconvenient, is not really injurious to health. Is that an incorrect conclusion?

MR. FISHER: It certainly is.

MR. MACAULAY, Q.C.: Then I am happy to have it corrected. Then you would conclude that a company which would let out fly ash -- and we do not need any scientists for that, Mr. Fisher; even I can measure fly ash. If that is so, should we worry as much as perhaps some suggest in this brief, about the things which are throwing poison and filth into the air, which we can get rid of, are not necessarily





injurious to health?

MR. MacRAE: That point has been brought out in one of the closing paragraphs.

MR. MACAULAY, Q.C.: I am sorry if I have anticipated.

MR. MacRAE: We have pointed out that fly ash and smoke is easier to overcome. The problem is with the chemicals which are pollutants, and which are more difficult to handle.

In the Sarnia area, we are finding out things I do not think anybody knew before.

MR. MACAULAY, Q.C.: Then your emphasis upon health and scientific knowledge are in a very limited ambit, but they struck me as pollutants which are not readily visible.

THE WITNESS: That is correct.

MR. MACAULAY, Q.C.: And you now say that the things which are visible are things which should go on forever, as they are things about which we can do nothing.

MR. NEWBURY: From a scientific point of view, I think we can take it that fly ash is no problem at all. It is only a matter of education.

MR. MACAULAY, Q.C.: I do not think Mr. Sanderson thought it was a matter of education; I think



he thought it was a matter of about \$1 million.

MR. NEWBURY: Eliminate those exemptions and thousands of industries emitting fly ash could stop it right easily.

MR. MACAULAY, Q.C.: That is, stop the exemptions?

MR. NEWBURY: Yes, and has been done for a thousand years.

MR. MACAULAY, Q.C.: Thank you.

THE CHAIRMAN: Will you carry on, Mr. Bernard?

THE WITNESS: Yes.

"The information stemming from such sources must be put to continuous use by the agency in assessing not only the over-all problem, but any particular situation before restrictive steps are taken which can, if good judgment is not exercised, cause irreparable damage. It must also use this information to keep abreast of technological advances and industrial processes which may, in the future, produce new problems of pollution. Such information can also be of the utmost value in other aspects of control such as education, publicity and in the technical advice and practical assistance that such an agency should,



as part of its duty, render to those who seek them.

It is hardly necessary to add that such research facilities should be provided with the most modern equipment available and be staffed by scientists and technicians eminently qualified by training, to make the most efficient use of the equipment, and to conduct searching enquiries into the problem.

The Association urges that the constitution of such an agency and the provision of research facilities precede the effective date of the restrictive provisions of any legislation which may be enacted."

BY MR. MACAULAY, Q.C.:

Q. That should include air pollutants of a visible nature?

A. That, of course, is in effect now.

Q. You think it is?

A. There are municipal by-laws governing that.

Q. Yes, but are they enforced?

A. I do not know.

Q. Have you ever listened to what our "super-Mayor", Mr. Gardiner, and others, have said?

MR. THOMAS (Oshawa): Not only him, but others.





MR. MACAULAY, Q.C.: He has a by-law, but he says that so long as the Statute remains on the provincial books, there is no point in enforcing the by-law in Toronto.

MR. BRONSTEIN: Could it not be enforced?

MR. MACAULAY, Q.C.: My constituents have not the means to bring any of you fellows into court.

What about the United States? What exemptions have brick companies in the United States, and other companies of a like nature? Are there any?

I think you will find the answer is "there are no exemptions".

MR. MacRAE: I think that is correct.

MR. MACAULAY, Q.C.: Then why is it indigenous to the United States, that they can build factories which do not make smoke, and we build those which do?

MR. NEWBURY: I think you will find they do.

MR. MACAULAY, Q.C.: I think you will find they are not exempted. We still import brick from there.

THE CHAIRMAN: It might be that their operations under the non-exemption rule, are much the same as we discussed with Mr. Sanderson today.

MR. SANDERSON: They are not free of air



pollution, from what I have heard.

MR. FISHER: I suggested that all industry should be treated alike, in the legislation.

MR. MACALLAY, Q.C.: If that can be done, it will be fine.

MR. NEWBURY: You cannot bring everything down to a No. 1 point, Mr. Chairman.

THE CHAIRMAN: All right, Mr. Bernard, please proceed.

THE WITNESS: This goes on:

" 4. The Association submits that air pollution falls into two categories, albeit these categories are not precisely definable. One embraces the relatively simple field of smoke abatement and fly ash control. The other includes all those problems of pollution regarding which so little is now known and which requires the application of science in their definition and ultimate solution.

The Association is of the opinion that both these problems should primarily be dealt with in any legislation which may be enacted. Provision might, however, be made for the administration of smoke and fly ash emission control being exercised at



the municipal level as at present, but all other aspects of pollution should be retained within provincial jurisdiction, for the reason that (a) most municipalities do not have the financial ability to attract suitable scientific and engineering personnel or to acquire and maintain the necessary scientific equipment, both prime requirements in the area of enforcement, (b) inter-boundary problems would be avoided, (c) uniformity of standards and enforcement whether exercised at the provincial or municipal level, would be guaranteed."

THE CHAIRMAN: Would you, or any other members of the Association, comment just briefly how enforcement could be carried out under the new legislation, which will have no exemptions, shall we say.

MR. MacRAE: I think you could do it fairly well by open hearings. We still have a couple of Pollution Boards in Ontario. If any company has an unfortunate accident in respect to water pollution, they are called by the Pollution Board of Ontario and asked how they can reasonably clear up the situation, so it will never occur again.

THE CHAIRMAN: You are referring to the





Ontario Water Resources Commission?

MR. MacRAE: Yes.

MR. ELLIOTT: You think the same thing would be good for air pollution?

MR. MacRAE: Yes, I think the municipal and provincial groups could sit down and come to very good agreement on this problem. I do not think there is any stumbling block in the way.

MR. MACAULAY, Q.C.: Do you mean that if an industry was not exempted, and was, in fact, included, and there was such an agency as you have suggested -- and I think it is a most helpful suggestion -- that agency could say to an industry, "Look here, you have been making a lot of noise, or smoke, or whatever it may be; you come and talk to us". Then they come up and are shown they are making a great deal of smoke. Then it would be for the Commission to decide whether it was practical for them to make any changes, and if so, how long they should have, and what cost they could reasonably be expected to bear and so forth. Is that what you have in mind?

MR. MacRAE: That is it, exactly.

BY THE CHAIRMAN:

Q. Will you carry on, Mr. Bernard?

A. Yes, Mr. Chairman.



" 5. The Association re-emphasizes the tremendous complexity of the subject of atmospheric pollution and the essential need for continuous research both fundamental and applied into all aspects of the problem.

6. The Association will co-operate in all reasonable measures undertaken by the Government to combat the situation. In turn, its members would expect that all possible assistance would be rendered by the appropriate authorities in helping them to overcome their pollution problems, lying as they do in a field which remains largely unexplored.

All of which is respectfully submitted."

THE CHAIRMAN: Thank you, Mr. Bernard.

MR. ELLIOTT: There are two or three kinds of pollution which are not mentioned at all. One is the case of the diesel-burning locomotives, and gases from the automobiles, or from the oil burners in our own homes, or apartment buildings.

No doubt some members of your Association are manufacturers of that kind of equipment which makes diesel engines, oil-burning equipment, and also automobiles.

Is the research going ahead behind the



scenes of the Manufacturers' Association to eliminate that kind of pollution with which we will be faced after we get through with the dirty, old coal-burning locomotives?

Can you give us any information as to what is going on behind the scenes to eliminate the gases from the diesels and the oil?

MR. MacRAE: I think the automobile manufacturers and the oil-burner manufacturers are very apprehensive of this problem, especially in Los Angeles County, where the automobiles contribute probably 50 percent. of the problem. There are 2,500,000 automobiles, and a great deal of the problem is created because there is not complete combustion, and there are also other things, which are irritating the eyes, and so forth.

MR. MACAULAY, Q.C.: The Committee has been there and seen that.

MR. MacRAE: That problem is not so acute in other parts of the country as yet. The peculiar topography of Los Angeles County contributes to that problem.

But I can assure you, the automobile industry and the petroleum industry is very apprehensive of the problem and they are doing all possible to





provide adequate burners.

MR. ELLIOTT: I am told that you only get about 50 percent. of the use of the fuel you put into these oil burners. You are in the oil business -- is that correct?

MR. MacRAE: I think the burners in the homes are very efficient. You may get a small amount of odour when a burner starts up, for, say, seven or ten seconds before you get fairly complete combustion. It is much better than automobiles.

MR. ELLIOTT: The exhaust going out of the chimney is exactly the same as automobiles?

MR. MacRAE: No.

MR. ELLIOTT: Is it not as large as that?

MR. MacRAE: There is carbon monoxide in all burners.

MR. ELLIOTT: You do not know how badly these pollute the air?

MR. MacRAE: I think I can safely say, in respect to home installations, it is not a problem.

MR. MACAULAY, Q.C.: Would it not include the care taken by the person who owns the burner, to have it cleaned periodically?

MR. MacRAE: The oil burner manufacturers maintain very efficient services in that respect.



MR. MACAULAY, Q.C.: But a great many people do not avail themselves of it.

MR. ELLIOTT: I understand it is all under the research department, and I wanted to know if you wanted to make any comment on it, because these are three things with which we will be faced in the future, which have not been mentioned here today, so far.

THE CHAIRMAN: Are there any other comments by members of the Committee?

MR. MACAULAY, Q.C.: Yes. There is the industrial waste as such. We must recognize the industrial waste. Have you any observations on that?

THE WITNESS: Mr. Chairman, what we are concerned with -- let us consider Metropolitan Toronto -- is the industrial waste which has come to a point beyond the power of municipalities to handle as such, and we are hoping that Metropolitan Toronto will take that over, and provide some form of disposal areas for that, and perhaps incineration for combustible things.

MR. MACAULAY, Q.C.: You do not think that you, as an industry, have to "combust" -- if that is a good word -- your own combustibles?

THE WITNESS: I was looking in the minutes of the Toronto Branch of the Canadian Manufacturers'



Association for 1900, and it was announced they should take all the combustible waste to the incinerators, so, if the city was doing it, the manufacturers did not feel they should do it themselves.

MR. THOMAS (Oshawa): That is really an interesting observation. Do you think that the municipality is responsible for the disposal of the waste you people put out?

THE WITNESS: Yes, Mr. Chairman.

BY MR. THOMAS (Oshawa):

Q. You do?

A. To provide places where it can be disposed of.

At the present time, there is no provision -- or very little -- for the disposal of combustible waste, or manufacturers' waste, either combustible or non-combustible. Industry has to truck this stuff forty or fifty miles, and they feel if a municipality will provide them with an area, they would be glad to pay for taking it there, and also to pay something for the disposal.

BY MR. MACAULAY, Q.C.:

Q. Your Association wants these dumps in the Metropolitan area no more than five miles apart.

A. We have not specifically stated "five miles",





but we say "within a reasonable distance".

Q. What do you think is "reasonable"?

A. Five miles has been suggested, and I think that is reasonable.

Q. Not to me. Did your people mention it, or how did it occur to them?

A. No.

THE CHAIRMAN: Are there any further questions? Mr. Bonham, would you like to say a word?

MR. BONHAM: Mr. Chairman and gentlemen; it seems to me we have a number of carts before the horses. They speak of industry being blamed for everything, but they do not know what is wrong.

I may be paralleling this with stream pollution. About six or seven years ago, we were similarly in the dark in regard to stream pollution. A case came up in the Supreme Court and they ruled that every stream could have a certain proportion of pollution. You fellows who are responsible for the legislation for air pollution, have not provided any standards. You are criticizing us, before we know where we should go.

Doctor Katz, who, at that time, was Chairman of the Technical Advisory Board of the International



Joint Commission, told us, when he started on these surveys -- I attended practically all of the meetings in Detroit and Windsor, and have been to a great many of them -- he told us the government would give us assistance in analyzing the outputs from our operations. They have not done so. Later, they refused to do so.

There are other things concerning waste in which we are interested, such as corrosion, but I think you fellows will have to tell us what to do. It is up to you people to set up a Technical Advisory Board, such as the Ontario Research Foundation, which has been very useful, and is composed of most of the experts in the country.

There are a number of jobs that our industry cannot undertake.

Speaking for the Ford Motor Company, I can say our parent company has been spending a great deal of money looking forward to controlling the waste carbons in the exhausts from motor cars. I sent some literature to you, Mr. Chairman, on that. I have drawn your attention to the fact that it takes years to develop it and prove it, and finally bring it into production.

We are doing that on our own in Detroit, and the "big three" -- Ford, Chrysler and General Motors --



have had an organization which has been meeting for years and years, and has done a great deal of work in that respect. I do not believe that politicians are the ones who do all the talking, by any means.

MR. MACAULAY, Q.C.: That is a fair statement, and I agree with it.

MR. FISHER: I think there is one comment in regard to the disposal of waste I would like to make. There is something being done by industry in relation to the disposal of waste from their furnaces; I think that is essential in regard to the solids from the making of steel. We have tried to make sure it does not become waste material. A number of technological improvements in the past have made it possible for us to take these steps.

There is considerable research being carried on by all industries with the end in view of the disposal of the waste, so I do not think the impression should be left that we are not cognizant of the fact that waste disposal is a problem, and that we are not doing anything about it.

THE CHAIRMAN: Gentlemen, I feel the discussion today has been most helpful. Sometimes it becomes a little bit heated, but that only adds to the interest.





I would like to thank you, on behalf of the Committee, Mr. Bernard, for your presentation, and also Mr. MacRae, the Chairman of your Committee. In fact, I would like to thank all of the gentlemen who took time off to come here from other sections of the province.

We feel that your brief will be very helpful in any final recommendations we may make to the Legislature, and once again, we appreciate your coming this afternoon.

We will adjourn this meeting now.

---The witness retired.

---Whereupon at 3:55 o'clock p.m., the further proceedings of this Committee adjourned until Tuesday, December 11th, 1956, at 10:00 o'clock, a.m.

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ONTARIO

P R O C E E D I N G S

of the

SELECT COMMITTEE APPOINTED BY THE ONTARIO LEGISLATURE  
TO ENQUIRE INTO CERTAIN MATTERS AND LEGISLATION  
REGARDING SMOKE CONTROL AND AIR POLLUTION IN ONTARIO.

Mr. A. H. Cowling, Chairman.

Dr. F. A. Evis, Secretary.

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Tuesday, December 11, 1956,

TORONTO, Ont.

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R. C. Sturgeon,  
Official Reporter,  
Parliament Buildings,  
Toronto, Ontario.



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INDEX OF PROCEEDINGS FOR FORTY-FIFTH DAY

Tuesday, December 11th, 1956.

Mrs. J. A. Gardiner. . . . .	3407
Brief by . . . . .	3408
Brief by United Electrical, Radio and Machine Workers of America and Local 536. . . . .	3416
Letter from Dr. Sellers. . . . .	3425
Table by. . . . .	3428
Dr. L. A. Paquegnat. . . . .	3430
Brief by . . . . .	3432
Dr. S. Ward . . . . .	3464
Dr. A. M. Fisher . . . . .	3471
Resolution - City of Brantford . . . . .	3487

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F O R T Y - F I F T H     D A Y

Toronto, Ontario,  
Tuesday, December 11th, 1956,  
10:00 o'clock, a.m.

- - - -

The further proceedings of this Committee  
reconvened pursuant to adjournment.

Mr. A. H. Cowling, Chairman,  
Presiding.

PRESENT:

Messrs. Elliott,  
Murdoch,  
Macaulay, Q.C.,  
Gordon,  
Thomas (Oshawa),  
Morningstar,  
Dr. F. A. Evis, Secretary.

APPEARANCES:

Mr. Harry Belyea,	Chief Air Pollution Control Officer, Metropolitan Toronto.
Mr. J.B.R. Neilson,	Chief Smoke Abatement Officer, city of Toronto.
Dr. S. Ward,	Department of Public Health, city of Toronto.
Dr. L. A. Pequegnat,	Medical Officer of Health, city of Toronto.



Mr. C. P. Cashman,	Deputy Reeve, York Twp.
Mr. William Norgate,	Representing Metropolitan Toronto.
Mrs. J. A. Gardner,	Representing the Women's Electors of Metropolitan Toronto.
Dr. A. M. Fisher,	Associate Professor of the Department of Physiological Hygiene, School of Hygiene, University of Toronto.
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THE CHAIRMAN: Ladies and gentlemen, may the meeting come to order?

Of course, the ladies are first, and it may be that Mrs. Gardner would like to say something about this problem.

F. EDNA GARDNER,  
representing the Women's Electors, Metropolitan Toronto,  
appearing before the Committee, but not being sworn,  
deposes and says:

BY THE CHAIRMAN:

Q. We would be very glad to hear anything you care to say, Mrs. Gardner.

A. I think under the circumstances, ladies being first is rather unfair. I really have very little to say. I said what I had to say in September. I am certainly not an extemporaneous speaker, so, with



your permission, I will read my brief:

"Sirs:

At the last open session of this Committee, here, September 11th, I appeared as a private citizen to ask this body to include in proposed legislation, laws to control air pollution from the operation of dumps. Since then, the Association of Women Electors, of which I am a member, have appointed me as their official observer.

In the intervening months, the desirability of such legislation has become more apparent from the protest of aroused citizens to the Waste Disposal program for Metropolitan Toronto.

From the very nature of the sources of revenue to a municipality, i.e. residential taxation versus industrial, a local municipality is in an exceedingly awkward position to formulate by-laws to control its own operations. That the Chief Engineer for the city of Hamilton previously made representation to this Committee for provincial laws, supports my point.

As of the 1955 census, Ontario has a population of 5,183,000; urban centres accounting for the largest proportion. As of 1956,





Metropolitan Toronto has a population of 1,347,905, or approximately one quarter of the whole province.

These facts support my brief that air pollution from dumps should be an intrinsic consideration of this Committee.

(signed) F. Edna Gardner,

(Mrs. James A. Gardner)."

This I had written, thinking I would come up yesterday, but having sat through the meeting yesterday, I realized it has all been before you.

Just the same, as a member of the Women's Electors, I wanted you to realize there is public awareness of what is going on, and you gentlemen should be aware of it.

If you have time, I may make a comment.

Some of the remarks -- of which I think you are also aware -- came from a body which was here, and I think it is valuable to know that ordinary citizens are becoming aware of such things, that is, a group in industry, such as the group here yesterday, presenting a brief which gives them a permit to alter their proceedings, because there is what you might call a "veiled threat" that they will move out and leave the area. That is an industry which supports our people.



But there is another angle, and that is wherever they go, they have organized labour to contend with, and that organized labour has achieved a certain standard of living conditions for everyone, so that no sooner do they go to another place, and spend a great deal of money building a new plant, which they have refused to do in the old place because of the labour market, the people begin to wish for a better standard of living, and in the long run they find that the municipal costs are too much for them to bear, so up goes the spiral. I think that defeats their own argument.

THE CHAIRMAN: I suppose some of the members must have a comment or two.

BY MR. ELLIOTT:

Q. I think you have hit the nail on the head. There is a great deal of common sense and logic in what you have said.

BY MR. THOMAS (Oshawa):

Q. The only thing I want to say is this; Mrs. Gardner says it is a question of a threat. That may be true, but I am not unduly disturbed about an industry locating in some other place. It should be impressed upon the Committee that it will not dare go ahead too quickly, and I think that provincial



regulations, more extensive than they are now, would take care of that situation.

A. That is what I have had in mind. It seems to me, yesterday, sitting in on the meeting, maybe I understood, but I had it in mind --

MR. MACAULAY, Q.C.: You did not misunderstand. That was the impression they were leaving, but they did not score very heavily.

MR. THOMAS (Oshawa): No, I do not think so.

MR. ELLIOTT: I think they feel there are some specific standards, and they are attempting to secure standards as easy as they possibly can for themselves. That is what I took from their arguments.

I think it behooves us to keep the standard as high as possible, and make them come up to that standard. That is something upon which the Committee and the municipalities are working, and there is a general clean-up campaign going on all over the world, and we must try to improve our standards as much as we can.

THE WITNESS: If they are moving away, they are only delaying matters for a short time.

MR. ELLIOTT: Industry will benefit as much as anybody, because they will have to supply the equipment to improve the conditions. Therefore, they





will make a few "bucks" out of it. So industry will benefit in most things, the same as anybody else.

BY MR. MACAULAY, Q.C.:

Q. Furthermore, they cannot move into a vacuum. They cannot move out of the city and expect to find a labour market, by moving into the middle of a field.

A. If they do, they will have to provide the services.

Q. I would not let that worry you too much.

Mrs. Gardner, before you go, I was advised by the air pollution people in Toronto -- Mr. Belyea, you tell me if this is right -- that the greenbacked brief, concerning dumps in the Metropolitan Area was only intended as sort of an informal guide, and it has neither been adopted nor acted upon, nor is there any indication of it being so. I understand it just forms a nucleus, from which they will launch into the subject.

MR. BELYEA: I cannot speak authoritatively on it, but I believe you are right, except the intention to adopt it. I believe if they considered it further, there will be another and more adequate report from time to time, because studies are being made as to whether alternative methods are worthy of



discussion.

MR. MACAULAY, Q.C.: Do not allow yourself to become too distraught about this.

THE WITNESS: No, except in the newspapers there was a notice of appropriation of \$300,000 for five dump sites. They would not spend \$300,000 without using the dump sites; they are too pressed for money.

BY MR. MACAULAY, Q.C.:

Q. Was that in the city of Toronto?

A. Metropolitan Toronto.

Q. He indicated to me the policy was not fixed, and the matter was still revolving.

MR. ELLIOTT: Seeing that Metropolitan Toronto has a "big deal" on, I think the dumps will affect air pollution more than anything else, outside of smoke, and I think we should make a study and see all the dumps in the area and see the engineers, and find out what the plans are.

MR. MACAULAY, Q.C.: What would be wrong -- adding to my friend's suggestion (Mr. Elliott) -- if you do not make a tour of the suggested spots, that you call in the person who is in charge of the Metropolitan area, in relation to dumps, since we are convinced it forms some part of the problem? Would you do that?



THE WITNESS: I believe it would be a very enlightening tour, if you want to examine the so-called "sanitary fill processés" which are going on in the province at the present time, and which are ideal, but which are too costly to be undertaken, in view of their report.

MR. MACAULAY, Q.C.: Mrs. Gardner, have you any suggestion for the names of the people who would be proper ones for us to call?

THE WITNESS: In what respect?

BY MR. MACULAY, Q.C.:

Q. In relation to the suggestion I made, about calling the officials of Metropolitan Toronto, concerning their policy regarding open dumps?

You have studied this problem, presumably not in a vacuum, but in relation to people and engineers.

Have you consulted professional people in relation to this matter?

A. I have consulted in this way, that I have written to the University, and to an Institute in Cincinnati --

Q. What about the people in Toronto?

A. I have not written to anybody in Toronto.

Q. I do not suggest your research is complete.





We can leave it to our Secretary, if the Chairman permits, to call the head of the Metropolitan situation. How would that be?

THE CHAIRMAN: I think we can get it organized, and secure the right people.

MR. ELLIOTT: As far as Hamilton is concerned, I think they have had more trouble with air pollution from dumps than from any other thing. I think we should refer to that in our final report.

MR. GORDON: Is not the day coming when they cannot even set up dumps?

MR. THOMAS (Oshawa): Last year, the City Council had a brief presented by the Chamber of Commerce, arguing the city should consider buying waste land for <sup>dumping</sup> industrial waste. It is becoming a problem there, in a small city like Oshawa.

MR. ELLIOTT: It is a major problem in our city.

MR. MACAULAY, Q.C.: Yes, and the larger the city, the more industrialization, and the worse it is.

---The witness retired.

THE CHAIRMAN: We have a submission to the Committee by the United Electrical, Radio and Machine Workers of America, and Local 536, Niagara Falls, Ontario.



MR. ELLIOTT: Is that not the same organization which presented one in Welland?

MR. MACAULAY, Q.C.: That is not a copy of what they said then.

DOCTOR EVIS (Secretary): Yes, in a way. There they said they were taken by surprise, and had no opportunity to prepare a brief, and this is the one they mailed in.

THE CHAIRMAN: You might read it, Doctor Evis.

DOCTOR EVIS (Secretary): This reads as follows:

"Mr. Chairman, Committee Members:

Due to commitments of our Union, we were unable to appear before your Committee when it held hearings in the City of Niagara Falls. We now wish to present our position to your Committee on the smoke, gas and air pollution which prevails in our city and district.

Our organization represents some 800 workers and their families in Niagara Falls and district, not only in their economic needs, but in many other fields of endeavour including the very important matter of Health and Welfare.

The Committee will no doubt concern itself



with the recent statement of Dr. W. C. Hueper of the National Cancer Institute in his report to the American Public Health Association which is a branch of the United States Public Health Service. Dr. Hueper declared that for 50 years, industries had introduced cancer-related chemicals into the atmosphere. Lately, he noted, motor vehicle exhausts have fouled the air at an increasing rate. In his opinion, Dr. Hueper declared, these observations 'favour the concept that the great majority of lung cancers, particularly those in males, are traceable to environment factors rather than excessive cigarett smoking'.

We believe the Committee should avail themselves of the valuable report of Dr. Hueber, to the American Health Association.

Of course, we had his report before it was made public.

For many years the citizens of Niagara Falls have been subjected to intense smoke from various industries, railroads, coal yards and the like. It is true to say however that there has been increasing dieselization on the railroads which has greatly reduced the smoke problem in this





regard, yet, in Niagara Falls, a main railroad connecting centre with the U.S.A., the problem still remains to an unhealthy degree.

Industry, on the other hand, has done little to eliminate the menace of smoke and gas fumes.

The North American Cyanamid Ltd. (Niagara Plant) is one of the worst offenders. Little, if any, improvement has been noted in the terrible air-pollution caused by this Company."

MR. MACAULAY, Q.C.: Pardon me, what plant is that?

DOCTOR EVIS (Secretary): The American Cyanamid Ltd.

MR. MACAULAY, Q.C.: Where is it?

DOCTOR EVIS (Secretary): At Niagara Falls.

MR. MACAULAY, Q.C.: On our side, or the American side?

DOCTOR EVIS (Secretary): In Ontario; on our side.

This goes on:

"This Company, which is situated in and about a residential area emits large amounts of smoke and gas from their main furnace room. On a dame day, one's car parked near the plant for a short period of time, will become covered with



this dirt and will appear white. These residue deposits are of such a nature that they cannot be removed by ordinary detergents. It should not take much imagination to realize what effect such pollution has on the health of the people who are compelled to breath this polluted air, in some cases 24 hours a day.

Cyanamid Company maintains they have spent large sums of money to eliminate air pollution. We believe the dust collecting devices are inadequate and much could be done in the way of installing and maintaining proper equipment such as cottrelles, etc.

There have been numerous complaints about this condition and yet very little seems to be done to correct the situation. It is hard to understand, in this day and age of modern scientific developments, why the Company has not made major efforts to completely eliminate this nuisance.

Two other large industries contribute to this hazard in Niagara Falls. They are the Norton Company and the Canadian Carborundum Company. While it is true these Companies are more on the outskirts of the city, two facts



must be kept in mind -- 1 - Depending on the prevailing wind, large sections of the district are disturbed by the smell and 'fall-out' of the smoke and gas from these factories. 2 - both these plants are situated in a fast-developing residential district. It may be said of the Norton Plant that with even a light prevailing wind, smoke and gas blankets two main highways, creating a driving hazard to passing motorists.

In the city of Niagara Falls, there are a large number of coal yards which operate businesses. These coal yards emit a considerable amount of dust and dirt and generally create unhealthy conditions for the surrounding neighbourhood. We would request the Committee recommend that all coal yards be located on the outskirts of town.

In the case of industry, it would appear the only requirement is to insist they expend the necessary amounts to correct the smoke hazard.

The Committee should understand that Niagara Falls has a peculiar situation in that we have considerably more fog than other parts of the province, due to the large bodies of water





surrounding the community, along with our varying temperatures. The fog situation, along with ever-increasing smoke, gas, dust, etc., as mentioned previously, could fast lead to a smog situation as exists in many cities in the United States and England.

Our organizations and the citizens in general are becoming greatly concerned with the unhealthy air pollution condition that exists in Niagara Falls, yet we are interested in the continued operation of industry in this area inasmuch as it contributes to employment, but we do feel, however, that these firms, many of whom are making record-breaking profits, can well afford from their vast resources of available money, to overcome this problem without, at the same time, decreasing their present efficiency.

We stand firm in our belief that all the matters can well be taken care of by the Companies involved, without the necessity of reducing employment or interfering with the production in any way by those concerned. It has been proven on many occasions in the United States that full employment can be enjoyed by



the workers, while a Company carries on a program to eliminate air pollution.

Our organization, and we believe citizens in general, stand opposed to any scheme which would put on the shoulders of the taxpayers the responsibility to provide funds to correct the situation created by business.

Our Union, the United Electrical, Radio and Machine Workers of America and its Local 536, in closing, requests the Special Committee to influence our Provincial Government to provide legislation which will, in effect, compel industry, business and railroad companies to eliminate, at the source, the hazards which flow from dust, smoke, gas and air pollution.

Respectfully submitted,

(signed) Wm. Snyder, Chairman,  
Legislative Committee,  
Local 536 U.E.

P.S. While we were unable to appear before the Committee when it sat in the city of Niagara Falls, our Legislative Committee would be willing to appear before your Committee at your convenience, in Toronto or elsewhere, if it were thought we could add to the facts contained in this brief, or other matters concerning air pollution."



THE CHAIRMAN: That is a very good brief. Mr. Thomas, are they a large and influential organization?

MR. MACAULAY, Q.C.: Are they not considered to be a Communist-dominated Union?

MR. GORDON: They do not belong to the Canadian Congress of Labour.

MR. THOMAS (Oshawa): They would not take them in. In fact, they were expelled some years ago.

MR. MACAULAY, Q.C.: They were thrown out, in fact?

MR. THOMAS (Oshawa): Although I think it is a very good brief. We went down to that Cyanamid Company. There is a very bad situation there; there is no question about that.

MR. ELLIOTT: We had a public hearing there, and there was not even one citizen appeared.

MR. GORDON: That was explained. We had a public meeting, and the only man who appeared before the Committee was a Scotsman, and the reason for no others being there was that the people work in that plant, and they feel they would be discriminated against.

MR. MACAULAY, Q.C.: That is very ridiculous. There must be somebody working in Niagara Falls who does not work in that plant.





MR. ELLIOTT: Certainly; there are the merchants and the tourist people.

DOCTOR EVIS (Secretary): Apparently the people in the district work in the plant, and this one man said that relatives of his had actually expressed fear at stating their opinions.

MR. MACAULAY, Q.C.: We are not going to become involved in that kind of a situation.

MR. BELYEA: I do not think you had anything drawn to your attention from the Company, from the other side of the river. The inspector there is trying to do a job on the New York side, and they have this pollution coming over from Ontario, and I heard the remark made, "Why not do something on the Canadian side?".

MR. MACAULAY, Q.C.: Presumably some is not more than just smoke.

MR. BELYEA: Some days, the industrial dust from the Cyanamid Company, and from the abrasive plant --

MR. MACAULAY, Q.C.: It is not easily thrown out from there.

MR. BELYEA: Yes, Mr. Gregory said --

THE CHAIRMAN: Is he from the Cyanamid Company?

MR. BELYEA: He is with a company on the American side, and he was talking about putting in



electronic collectors.

MR. GORDON: In connection with the Cyanamid Company, I think you will remember they took us out into the yard, and they showed us all the equipment which had just arrived, and was going to be installed at a cost of about \$140,000.

MR. MACAULAY, Q.C.: Are dust collectors the whole answer in their plant?

THE CHAIRMAN: That is the big thing. It is mostly dust.

We have another letter which I think should go into the record. I would like Doctor Evis to read that at this time.

DOCTOR EVIS (Secretary): This is a letter from Doctor Sellers, of the Division of Medical Statistics, of our Ontario Department of Health.

I wrote to him and asked him if, in the last few months, there had been any additional statistics in regard to cancer mortality rates in the province, and he says:

"Dear Doctor Evis:

In reply to your letter of November 21, 1956, I regret that this Division is unable to provide any further data concerning a possible relationship between air pollution and cancer



beyond that already sent to you. However, we are enclosing one additional table which shows the male cancer mortality rates by site for five large cities in Ontario; all of these rates have been standardized for age differences.

It is of interest that the cancer mortality rate for males is consistently higher for these cities than for Ontario as a whole for each site of disease. The urban excess is greatest for the following sites -- buccal cavity and pharynx, larynx, lung, bronchus and trachea. Furthermore, the mortality rate for cancer of the lung, bronchus, and trachea (A50) is somewhat higher for Toronto, Hamilton and Windsor than for the other two cities.

We are not in a position to undertake the analysis of motor vehicle registrations which you outline. However, we feel sure that Mr. A. H. Rowan, Supervisor, Accident Records and Statistics, Motor Vehicles Branch, Ontario Department of Highways, would have the necessary data at hand to do this for you. We suggest, therefore, that you might refer this matter to that Department.





Sincerely yours,

(signed)'A. H. Sellers'

M.D.,D.P.H., Director ,  
Division of Medcial Statistics."

I also asked him to analyze the Motor Vehicle Statistics since about 1930, and to predict the number of cases we will have in 1960 and 1965, and he says, as I have already read:

"We are not in a position to undertake the analysis of motor vehicle registrations which you outline. However, we feel sure that Mr. A. H. Rowan, Supervisor, Accident Records and Statistics, Motor Vehicles Branch, Ontario Department of Highways, would have the necessary data at hand to do this for you. We suggest, therefore, that you might refer this matter to that Department."

Then there is a table here which we can put into the proceedings. I do not think we should take the time to read all the figures now.

THE CHAIRMAN: No.

---Whereupon, a table attached to Doctor Sellers' letter regarding "Standardized Cancer Mortality Rates, and so Forth" was admitted into the record, and is in words and figures as follows, to wit:



STANDARDIZED\* CANCER MORTALITY RATES, ONTARIO MALES, 1950-1952

BY SITE OF DISEASE, SELECTED CITIES

RATES PER 100,000 POPULATION

SITE OF DISEASE	I.S.C.No. "A" List	Hamilton	London	Ottawa	Toronto	Windsor	Total	Rest of Ontario	TOTAL ONTARIO
Buccal cavity and pharynx	A 44	5.8	8.0	6.8	7.3	9.1	7.2	4.1	5.0
Stomach	A 46	30.0	24.7	25.6	27.5	41.9	28.6	24.6	25.7
Intestine	A 47	21.3	21.3	19.8	20.8	13.8	20.2	15.0	16.5
Rectum	A 48	9.1	9.2	14.9	11.7	12.7	11.6	8.0	9.1
Larynx	A 49	1.7	1.4	3.1	3.2	1.3	2.7	1.5	1.9
Lung, bronchus, trachea	A 50	27.6	22.0	25.6	31.5	33.3	29.6	15.9	20.0
Prostate	A 54	16.8	13.6	27.3	13.0	15.1	15.7	15.2	15.3
All other sites	Residual	47.4	49.8	46.4	48.5	42.2	47.6	34.1	38.0
Leukaemia, aleukaemia	A 58	10.3	7.8	9.6	4.9	7.6	6.9	5.5	5.9
Other lymphatic, etc.	Residual	7.6	7.5	9.2	7.4	3.4	7.3	5.6	6.1
ALL SITES		177.4	165.7	189.1	176.9	180.3	178.0	129.9	143.5

\* The death rate at all ages calculated for comparative purposes in such a way that allowance is made for the age composition of the population involved.

Note: The rates for the individual sites do not add up to the rate for all sites combined, because these are standardized rates.

November 29, 1956.

Division of Medical Statistics,  
Ontario Department of Health.



DOCTOR EVIS (Secretary): As you will notice, the table is for cancer in selected cities such as Hamilton, London, Ottawa, Toronto and Windsor. The mortality rate for Toronto, per 100,000 population, would be 176.9.

For the rest of Ontario, it is 129.9. In Hamilton, it is 177.4.

MR. ELLIOTT: Would not many people come into the centers to the hospital for treatment from the outlying areas, and possibly die in these larger centers?

THE CHAIRMAN: I notice that Ottawa has the highest.

MR. ELLIOTT: Is there a large cancer clinic, and they come there from all over the province?

DOCTOR EVIS (Secretary): They consider if they come from Brantford to Toronto for treatment, their residences would be Brantford.

MR. GORDON: If it was a death, it would be Brantford.

MR. ELLIOTT: In other words, that is the true picture of what actually the municipalities do. Ottawa is the highest.

DOCTOR EVIS (Secretary): The figures are as follows:





"London, 165.7; Ottawa 189.1; Toronto, 176.9; Windsor, 180.3, and the average for the rest of Ontario is 129.9."

MR. ELLIOTT: There is a big difference there.

THE CHAIRMAN: We are very pleased this morning to have Doctor L. A. Pequegnat, the Medical Officer of Health for the city of Toronto present, and one of his staff, Doctor Stanley Ward.

I know that Doctor Pequegnat has taken a real interest in the affairs of our Committee, and has made, from time to time, some rather fine remarks in regard to the job we are endeavouring to do.

I am wondering if there is anything you would like to say to us, Doctor Pequegnat, in sort of a general way, about our problem as applied to the city, and then perhaps your associate might care to make a few comments.

D O C T O R   L . A .   P E Q U E G N A T , M . D . , D . P . H .

Medical Officer of Health, city of Toronto, appearing before the Committee, but not being sworn, testifies as follows:

BY THE CHAIRMAN:

Q.        Would you be good enough to proceed in your own way, Doctor Pequegnat?    We shall be very glad to



hear anything you care to say to the Committee.

A. Mr. Chairman, ladies and gentlemen; it was difficult to anticipate what would be desired of me, when I received your kind invitation to be present. I do not expect to present a brief, nor any formal statement.

As the Medical Officer of Health, I have a few thoughts.

From a public health viewpoint, it is quite obvious the authority given under the Public Health Act is not adequate to control the situation.

We, in Toronto, had an advisory smoke abatement committee, which was later the air pollution committee, and it was my privilege to sit, by invitation, in on a number of conferences held, but actually, I was not an official member of the committee. In spite of all that, I was asked by the Board of Health last year to make a report on the terms of reference given to me, namely "The indices of smog". I do not know whether the Committee is desirous of hearing the highlights presented in that report or not.

Q. I think we should.

A. It was made in September. It is quite a general report.

Aside from the preamble, there are a few



sentences which I perhaps should repeat. The first sentence with some meaning was:

"We are all aware that what has heretofore been the odd recorded major disaster has in recent years seemingly culminated more frequently.

Perhaps we are more alive to the subject; perhaps we have examined the statistical evidence more carefully and analytically. This alone is not sufficient to quieten our concern as we learn of incidents presenting features which at no time would have escaped notice."

That is just old matter. It shows that we are more alive to the situation. I was giving the necessity for considering all other factors.

THE CHAIRMAN: On that point, Doctor Pequegnat, some three or four weeks ago we had an inversion situation here in Metropolitan Toronto which was very noticeable, and I think it was one of the foggiest four or five days Toronto can remember. And two or three days ago, we had very much the same situation, and coming in from our end of town -- the west end -- to downtown Toronto, the fog, combined with the usual dirty smoke emission and other pollutants going into the air, was very noticeable, and I was asked by people who know of my interest in this





matter "what about the Toronto situation?" Could it be comparable, in a small way, to the London fogs, or some of these places where they have had the more serious disasters?"

I was wondering, from a public health point of view, how the situation looked to you? How could it be built up?

A. It could be. There are massive effects of air pollution. That is one point we make in this report. We probably have these inversions in smaller form, but I set out earlier in the report that because we have not the extreme meteorological and climatic conditions here which characterize the fogs in London, and the Meus Valley, and some others with which we are familiar, ours may be on a smaller scale, but I did come up with a discussion from that point of view. I said:

"The basic climatic, meteorological and topographical phenomena which precipitate disaster are more or less unchanged in the given locales and so one concludes that other factors are at work."

Then I go on and say:

"As men have faced the question in this perspective, the thing which impresses is the



apparent intensification of the contributing factors."

Then, still further on, I say:

"The study of these factors makes clear that there is a wide diversification of the same."

Then I continue:

"Still further, the study of these factors makes clear that there is a wide diversification of the same. For example, the causes of the Donora Valley disaster will not in large part account for the London disaster. Again in the Los Angeles situation neither of the earlier episodes will explain wholly a state in which sharp calamity is replaced by a slowly operating distress in a longer more consistently present state of affairs. Places like Detroit, Toronto and others, highly industrialized or experiencing growth, present the more common factors of atmospheric pollution related to industry, railroading, shipping, automobile use, refuse and waste incineration, to a lesser degree domestic heating and incineration, particularly in the larger commercial buildings and multiple dwellings. This same diversification has associated with it the elements of intensity and duration. In



the Donora Valley the more or less constant emanation of smoke and gas from the metallurgical industry reached a disaster-dealing level as the result of an unusual atmospheric inversion which added a ceiling to the existing wall against dispersing air movement. Topography favoured this. In London an extremely heavy fog and a high barometric pressure united to become the holder of the smoke, fumes and gases of the city in unprecedented quantity over a longer than average span of time. There became evident in both of these incidents another phenomenon, namely, that certain gaseous elements or compounds, sulphur dioxide, for example, in itself perhaps within the accepted limit of tolerance, when present with other gases, become more lethal. Synergism, that is, combined effect greater than that of the sum of the individual parts, about which there is yet much to learn, became a new concept in these settings. Of much longer knowledge is the fact that sulphur dioxide in the presence of moisture quickly becomes sulphurous and sulphuric acid, highly corrosive and irritating. By way of new experience in London was the observation that





stepped-up morbidity and mortality affected in the main the young, the old, the debilitated, especially those prone to respiratory disorder. The lesson drawn was that tolerance to pollution is relative and that margins can disappear more readily than one might think.

In Los Angeles the picture is different again. There is considerable of the element of atmospheric inversion favoured by the topography of the area. The inversion varies, may disappear for stretches. Los Angeles on the other hand is rapidly growing. Domestic heating is not a feature of the area but smoke is not absent. It is estimated that there were not so long ago 100,000 backyard incinerators for destruction of garbage and refuse. The city with its immediate environs is growing at a terrific rate. Automobiles are being added at the rate of 100,000 per year. The petroleum cracking industry is one of the industries expanding rapidly and throwing out increasing amounts of the noxious hydrocarbons."

Q. You quote 100,000 backyard incinerators. The figure they gave us was over a million, and that is the figure we have been using. There are eight



million or ten million people in Metropolitan Los Angeles.

A. That is true. Then there are multiple buildings and people who are commuting in and out. Perhaps I have understated that matter.

This goes on:

"Thus far we have been dealing with areas which present a basic vulnerability offered by a meteorological or topographical situation not common to all sizeable communities. In many places, however, we are facing in increasing amount the factors incidental to growth, industrialization and the products of man's amenities. A reasonable conclusion is that, short of gross vulnerability, contributing factors can reach the level of probably insidious damage in many urban centres. We in Toronto are not highly beset by dangers inherent in fogs or atmospheric inversion -- we do experience a measure at times -- but we are faced with smoke pollution, industrial fumes and automobile exhaust. We are in the front line of growth and expansion on this continent. We are also in the front line, it can be said, of those who argue not too meticulously about the danger of major disaster



but who desire as clean an atmosphere as can be attained by concerted effort. What there is of evidence in terms of indices -- vide the terms of reference -- is secondary to a realization that our atmosphere can be further improved and that it need be watched as we grow and expand. We need not look far for evidence of economic loss in the environment and take no particular comfort from the fact that many cities are in much worse position than we are. One thing we do lack, in common with other areas of size, is an assessment of the masked effect of pollution, immediate or long term, on the health and lives of inhabitants. Studies of this nature are most difficult as attested to by assessments now under way under governmental aegis on this continent and in parts of the province not far from us where conditions are comparable with ours."

MR. MACAULAY, Q.C.: Excuse me, Doctor Pequegnat, but I do not want to miss any of this. You are reading rather rapidly.

THE WITNESS: Is it interesting enough so I should speak more slowly?

MR. MACAULAY, Q.C.: Will you slow down a bit,





as I am very interested in everything you have to say.

THE WITNESS: Very well, I will do that.

This goes on:

"Studies of this nature are most difficult as attested to by assessments now under way under governmental aegis on this continent and in parts of the province not far from us where conditions are comparable with ours."

That is a repetition, but I think it is of some importance.

After I wrote that preamble, then I went more definitely into the terms of reference. These I propose to deal with under two headings, the first is "the losses" and the second "the attack objective".

There are economic losses which I will not go into in detail, but which probably represent millions of dollars.

BY MR. MACAULAY, Q.C.:

Q. You are going to file this material?

A. I will, if you wish.

MR. THOMAS (Oshawa): I think it would be very interesting.

THE WITNESS: Then we come to the human loss, and I say:

"This too may be regarded as economic but thas



sufficient connotation to be assessed separately. It is the index for which the greatest search is being conducted and the answer is not a simple one by any means. It is not sufficient to say that a smoke pall produces an unnatural environment in which are shut out in varying amount the beneficent rays of the sun; nor is it sufficient to say simply that the inhalation of suspended particulate matter or fumes must be harmful to health. Answer seemingly must be found to this question: What are the thresholds or upper tolerances of individuals of any or all ages, sick or well, close to or farther remote from sources of pollution, to the several ascertainable contaminants of the atmosphere and to their combined effects in the atmosphere as a whole, over limited or extended periods of time? This is an extremely intricate question and it is interesting to note the statement appearing in the last issue of the Canadian Journal of Public Health by Dr. Morris Katz, Consultant, Atmospheric Pollution Services, Department of National Health and Welfare, under the caption of Health Aspects of Air Pollution:



'This is a controversial problem and much has been written about air pollution in relation to community health in recent years. It was concluded by the health panel at the United States Technical Conference on Air Pollution, convened at the request of President Truman at Washington, D.C., in May 1950, that apart from acute manifestations, caused primarily by irritation of the respiratory tract and other parts of the body, in localized areas under unusual weather conditions, the effects of the more common atmospheric pollutants upon the general health of the population of our urban and industrial centres have not been demonstrated in the form of authenticated chronic disease processes. The complexity of the problem is such that further evidence must be sought before the hazard to public health can be appraised adequately. The situation remains much the same today.'

BY MR. MACAULAY, Q.C.:

Q. That is no excuse for not doing something.

A. That is still no excuse. This goes on:

"Studies related to this question are going on over the continent and one in particular is





being conducted at the Ontario-Michigan border under the aegis of an international joint commission, in which departments of the Ontario and Ottawa governments are co-operating."

BY MR. MACAULAY, Q.C.:

Q. You said something about it may have been achieved, and being a professional man myself, I do not want to trap you. I think you/said that many cities are worse than Toronto.

A. That is a generality. There should be no comfort in the realization that we are not as bad as some cities.

Q. I appreciate that, but I wonder if the mere making of the statement does not offer some comfort to some persons in some quarters.

I wonder if there is any evidence to the effect that many cities are worse than Toronto?

A. I think it could be readily found that there are cities which are worse than Toronto.

Q. You made the submission, and I presume you made it as a generality, concentrating on another aspect, of the sentence,  
/or was it a statement of fact? I take it you are making it as a generality, connected with the other parts of the sentence?

A. Yes.



THE CHAIRMAN: There are worse cities than Toronto. We have seen them.

MR. ELLIOTT: Los Angeles.

MR. MACAULAY, Q.C.: What others do you consider to be worse?

THE CHAIRMAN: Chicago and New York.

MR. MACAULAY, Q.C.: I disagree.

MR. ELLIOTT: I disagree with you also, Mr. Chairman.

THE CHAIRMAN: I do not care whether you agree or not. I said Toronto is the worst city in Ontario, but there are cities in the United States --

MR. BELYEA: I think you are both right --

THE CHAIRMAN: That is fine, Mr. Belyea. Say no more.

MR. BELYEA: Other cities could be worse in some respects. Possibly we are worse than other cities we have visited. The oil fumes in Los Angeles may be worse than the gasoline fumes.

MR. MACAULAY, Q.C.: I am sorry I anticipated, then.

THE WITNESS: This goes on:

"A further excerpt from the report by Dr. Katz will be enlightening:"



Then we took areas in which the pollution is high, and areas in which the pollution has been measured as relatively low, and I point out that from what Doctor Katz has said:

"In the Windsor-Detroit international investigation a modified epidemiological approach has been utilized in the study of the effects of prevailing atmospheric contaminants on health in areas of relatively high and low pollution. This survey covers a period of about two years and the methods employed have been described by Peart and Josie. The high and low pollution areas were selected from the results of extensive air sampling networks. The sickness experience of members of households in these areas of different average pollution levels has been recorded every two weeks by trained enumerators. Continuous records have been maintained of the levels of air pollution and meteorological changes in the environment. Population groups in four areas in Detroit and two in Windsor have been matched with reference to racial, socioeconomic and other factors, as far as practicable. In addition, groups of households in two small towns, which do not contain





heavy industry and are situated beyond the major influence of contamination from the Detroit river area, have been subjected to similar observations on symptoms and illnesses, with continuous testing of the environment, as a type of control.

The objectives of this study are not only to evaluate the possible health effects of long continued exposure to common pollutants in the urban environment but to reveal the responses to comparatively rapid, short period increases in pollution load, such as that produced during periods of inversion and smog. The health information, which has been collected, includes comprehensive records of all types of illness and symptoms, including those associated with chronic respiratory disease, and non-chronic ailments. The massive amount of data gathered in this two-year pilot study is now undergoing systematic evaluation by a group of experts. The preliminary findings may be available in the near future.

According to Dr. Justin M. Andrews of the United States Public Health Service, 'more epidemiological studies of this general type



should be developed in other cities where the nature of the air pollution problem is different but where it is presumed that health defects are being produced.'"

BY MR. MACAULAY, Q.C.:

Q. You will wonder where I have been. You keep referring to the "Board".

A. The Toronto Board of Health.

Then I conclude the remarks in regard to "losses" by saying:

"Such surveys will ultimately lead to more productive techniques and to better indices of atmospheric pollution than we have at present."

Then I approach the thing from another angle, "the specific objects of attack", and the report reads:

"(1) Smoke - Smoke abatement is a widely-applied, somewhat traditional effort, traditional in the sense that law has referred to it for long. On the other hand, law has not adequately struck at the roots of the problem where, for example, as quoted from the Public Health Act of Ontario, a comparatively old Act, a nuisance is perpetrated when the fire of a fireplace or furnace fails to consume the smoke



so far as practicable or when a chimney emits smoke in a quantity to be injurious or dangerous to health. In places where more definite ordinances have been set up, such as the Smoke Abatement By-law passed pursuant to the City of Toronto Act 1948, there is basic attempt to control the density of emission in relation to the time allowed for emission. A point of weakness is the exemptions allowed in the permissive legislation which underlies local control."

BY THE CHAIRMAN:

Q. Doctor Pequegnat, would you agree to eliminating all exemptions?

A. Yes.

THE CHAIRMAN: Thank you.

THE WITNESS: This goes on:

"Certain industries are exempt, at any rate until such time as it is declared necessary to bring them under the by-law and, from this point on, notice and appeal from such decision may bring about delaying actions. Furthermore, the by-law is limited to control on the products of combustion only. Control of domestic smoke starts at the level of the





apartment house. Railroads are subject to rules laid down by a federal authority."

BY MR. MACAULAY, Q.C.:

Q. It says "everybody is assumed --". I do not know whether we are. I have been reading a transcript of the hearing before the Railway Transport Board, and I do not think we have the right to assume they have the right to smoke us out, because that is the way they want to run the railways.

What will you do about apartment houses? I do not know where your assumption is going to lead you, but what do you say about apartment houses? What would you do about them?

A. There is a sub-report. I do not know whether it is filed, but it refers to the proper type of heating arrangements in apartment houses.

Q. Is there a report?

A. I assume so.

Q. Where can we find that?

MR. BELYEA: Doctor Ward and I are working on it, and we expect to lay something before the Toronto committee within the next few days, and we hope to immediately include it in our regulations, which presently need improvement.

MR. MACAULAY, Q.C.: May we have a copy of



what you are going to lay before the committee?

MR. BELYEA: Yes, we hope to have it in a week or two.

THE WITNESS: Then, we go on to say:

"These are some of the matters which have been engaging the attention of the Toronto authority, and while now on the aspect of desired further advance, one is constrained to note the newer emphasis, howsoever one would implement the same, on better selection selection and use of fuels, the control or arrest of the volatile or propelled elements of smoke by more complete combustion and screening, and in overall fashion by the use of better equipment and the stepping up of the qualifications and practices of those operating the installations."

Then, in regard to "Industrial Fumes, Gases or Dust", we say:

"These are mounting in number and quantity in modern manufacture and processing. Comment is transferred to a general paragraph which will follow.

(3) The Exhausts of Internal Combustion - The increasing use of automotive equipment is our focal point. While it would be difficult



to argue, in the present state of knowledge, that carbon monoxide is exerting an insidious lethal effect in the more open spaces of an urban community, one may conclude that concentration in pocketed, congested areas may approach the level of caution. There is, therefore, every reason to encourage the interest of the automotive industry in its attempt to develop more efficient carburetion and combustion, combined with a reported attempt to neutralize or inactivate engine exhaust. Dieselization does not present the same advantage to the road vehicle as it does in substitution for coal-burning equipment on rail; the point of attack is different.

Giving our subject of control of air pollution the broad look, one is impressed by the fact that while much has been done by industry in controlling and recovering of large fractions of its dusts and gases at the source by installation of suitable equipment, much of the advantage is offset by erection of more industry in the areas already highly affected. An additional complication is the chemical interaction of some pollutants of the





atmosphere to form substances more harmful than their originals. Pollution control is often limited by economics and a lack of knowledge of practical engineering methods. It has been found that recovery of useful by-products is the best approach, one extensively used in the smelting, steel and petroleum industries. These methods are to be featured but, on the other hand, where the health of man and animals is involved, even non-marketable wastes must be recovered or controlled. This goes for all of the more toxic metallic fumes and dusts and for the irritating and malodorous compounds. The control of smoke as such is another topic except as fumes and gases and dusts may be additives to which special attention must be directed."

That is just a broad outline of the action of the Board of Health. I am not going into more detail. The report was lengthy enough as it is.

Then we went on to describe the control in the city of Toronto, and I say:

"To describe the evolution of controls in this city is no easy matter. It is not that they have been absent or feebly pursued; rather they



have had their legislative limitations and moreover, here as elsewhere, we are awaiting the conclusions of studies which are eminently vital to an understanding which will lead to the putting of teeth into our legislation".

That may again raise the question amongst you and your colleagues as to how long we should wait, and I say:

"A programme of publicity and education would seem essential to the steps which will ensue the studies and their findings so that the programme of action may be as much co-operative as it is coercive.".

I do not know whether you want me to go further. I did deal with the smoke abatement work in the city of Toronto, and the realization by the Metropolitan Corporation that atmospheric pollution recognizes no boundaries and that the taking over by the Metropolitan Corporation of the authority -- at least, the approach to authority--and that the Toronto Board has been delayed in accordance with the timing on the Metropolitan level, and in all probability there will be the creation of an Advisory Board at the Metropolitan level.

Then this goes on to say:



"With this change comes the satisfaction of knowing that a vigorous enquiry is now being pursued by a Special Committee of the Ontario Legislature which is not only assessing the problem of air pollution in the province but is also studying the progress being made in the larger centres of the U.S.A. It has been said that Canada lags behind Britain and the United States in its consideration of atmospheric pollution at all government levels. Ontario now has its golden opportunity to shake off this allegation and I would think is now in the process of doing so."

Then in conclusion, I say:

"What the immediate or near future holds can only be conjectured, Seemingly one thing is sure, namely, that when the Special Committee makes its final report -- an interim report already reveals the trend -- there will be a stated determination to bring the blot of air pollution under control by all reasonable and enforceable means. Whether the principal authority will be held at the provincial level of action or committed to the local authority by enabling legislation remains to





be seen. The most important thing is that the coverage and implied techniques shall no longer be thwarted by the limits and inadequacies of legislation. The scientific studies now going on at federal and provincial levels will be of most material assistance, as will also be the programme of the metropolitan authority which by report has at its command an improved budget enabling it to employ considerable staff, some of it of advanced training, and to purchase necessary new mobile and other equipment essential to basic measurements and determinations.

By and large the future of air pollution control looks much brighter than the past."

THE CHAIRMAN: Thank you, Doctor Pequegnat, very much. We are certainly very fortunate in having you come here and sitting in with us.

THE WITNESS: I just picked this up as I left the office.

BY THE CHAIRMAN:

Q. Yesterday, the Canadian Manufacturers' Association dealt with the problem of air pollution, but seemed to be keeping <sup>to</sup> other aspects of it very much regarding the physical damage to property, rather



than to the subject of the effects on the health of the citizens.

What I would like you to do, Doctor Pequegnat, from a medical point of view, is to say this; "are all aspects of smoke control and air pollution affecting health"? In other words, the whole picture is primarily a health problem, more so than it is physical?

MR. MACAULAY, Q.C.: Oh, is that a loaded question.

THE CHAIRMAN: That is the \$64-question, but I would like to get it clear in my own mind. What is the effect, as a medical officer, on the health of the citizens of Toronto, would you say? We do not want anybody to belittle the fact that this pollutant atmosphere is mostly a physical thing, to such an extent that you cannot paint your house, without having some of the soot and dust getting on the paint before it is dry.

Of course, all that is going into our lungs, this black soot and fly ash, which people say damages their physical property to a very great degree. Is it not damaging to health, from the air that we have to breathe?

THE WITNESS: When I spoke of the "tolerance



of people", I have to re-introduce that subject. We do not know just what tolerance the people have, or just what is adaptable to the people from air pollution.

But, by and large, one can say that air pollution has an adverse effect on the health of the individual, even though one cannot measure it. It cuts out sunlight; it is depressing; it cuts down a great deal of visibility, and we are looking for an answer to the question of degree or level at which certain changes are occasioned in the human body, as a result of breathing this stuff.

BY MR. ELLIOTT:

Q. The life expectancy has gone up considerably over the last ten or twenty years in the province. How much would you say? It has been figured to average about ten years.

A. I cannot give you the figure, exactly.

Q. If fly ash and smoke pollution were taken out of the air, how much would you expect it would raise the life expectancy? Can you tell me?

A. Do not ask me that question, because the answer might be disappointing.

MR. THOMAS (Oshawa): When Doctor Pequegnat spoke of "tolerance", I was reminded of a situation in the General Motors before the war. The plant was





ventilated, and the foreman took samples of the air and sent it up to Toronto, and the report came back, and he and I were debating the matter, and he said, "You need not worry; it is quite all right, as long as you do not take too much". I said, "Will you kindly then sit here and tell me when I have had enough"?

BY MR. MACAULAY, Q.C.:

Q. What about the open dumps, from the point of view of health?

A. With respect to what the Chairman said, I gathered that yesterday the Manufacturers' Association did not even mention physical damage -- I mean chattel damage.

Q. I think they were trying to pin it all on health, and this being sort of a vague and vapory sort of a thing, you cannot expect to prove it exactly, nor escape it completely. I asked them yesterday with reference to these open dumps in the Metropolitan Toronto area, for dumping industrial and residential waste.

A. Naturally, in the city of Toronto, all the available spaces which could be used for dumps have been utilized. We have considered that, and we have come to the conclusion that we have no such areas



left for dumping purposes.

Q. Do you mean you have no areas left, or do you mean you have no areas left in which you could dump, where it would not do any injury?

A. Within Toronto proper?

Q. Yes.

BY THE CHAIRMAN:

Q. In Toronto, you say there is no place available, no matter how you look at it?

A. Oh, Metropolitan Toronto is a different situation.

BY MR. MACAULAY, Q.C.:

Q. There is the center of University Avenue where there is land upon which you could dump. When you say there is no land on which you can dump, you mean no land on which you can dump without being physically injurious to the health of the residents of the city? Of course, there is land upon which you can dump.

THE CHAIRMAN: You mean certain land upon which you could dump without being injurious to health?

MR. MACAULAY, Q.C.: Yes. I am asking this question in a vapour. I may get ready to "nail" you, in a couple of questions from now.

THE WITNESS: You are asking the question, if



there is land upon which dumping could take place?

The answer is "Yes, if it was permitted".

BY MR. MACAULAY, Q.C.:

Q.        There is land -- I will re-state it, while you are thinking up the answer.    You are a very genial, fast-moving man, and I will re-state my question.

          There is land in the city on which dumping could be carried out, but it is unwise to do it, or to permit such open dumps in the city of Toronto, because it would be injurious from a physical and health point of view?    Is that why you said you did not know of any more vacant land?

A.        We do not know of any more land which we could enter.

Q.        So it simply means you have no more vacant land upon which you can go for dumping?

THE CHAIRMAN: I do not think I agree with that.

MR. MACAULAY, Q.C.: The Doctor nodded his head affirmatively.

THE CHAIRMAN: If the city felt it could dump without affecting the health of the citizens, they could expropriate the land.

MR. MACAULAY, Q.C.: Yes, but they might not do it because of the cost.    If they do not do it





because of the effect on health, I think we must assume they do not do it, not because of the cost, but because of the general "hubbub" which might be created in the minds of the public.

In any event, dealing with the general proposition of open dumps, have you any observations to make as to the advisability of open dumps containing industrial waste which is non-combustible?

THE WITNESS: Non-combustible?

BY MR. MACAULAY, Q.C.:

Q. Yes?

A. There is always the other element of decency.

Q. I mean dumping the waste in open dumps. The Metropolitan area is contemplating opening up dumps within a five-mile radius.

A. With sanitary fill.

Q. With nothing; just dumping it in.

THE CHAIRMAN: Not without being permitted.

THE WITNESS: The legislation of Bill No. 108 seems to enable the Metropolitan area to acquire such land.

BY MR. MACAULAY, Q.C.:

Q. Once it is acquired, one usually finds a way to make use of it, for the purpose for which it was required.



A. I still feel that a sanitary fill would "go over". There would be progressive use.

Q. What do you mean by that?

A. Not just dumping all over the bottom and leaving it open. Rather, they would work from the edges and give it a sanitary fill.

Q. From the bottom, until it gets up to the top?

MR. THOMAS (Oshawa): As you complete the fill-in.

MR. MACAULAY, Q.C.: You would go from the bottom with garbage, and then put in a filler, and then put more garbage, and so forth.

THE CHAIRMAN: No, day by day. You do not wait until you get it full.

THE WITNESS: You do not leave it open. I should think it would be covered within a matter of a day -- or days.

BY MR. MACAULAY, Q.C.:

Q. Is it your opinion that is sufficient protection for the residents in the area?

A. To what? To fill and cover?

Q. Yes, sir?

A. I do not like the emphasis on the word "sufficient". I do not know what the menace to an area



might be. It is largely a bad odour, is it not?

Q. I expect that is one facet.

A. Then there is the aesthetic side, the unsightliness of it.

Q. Why think of the aesthetic side?

I was wondering if there might not be some pollutants which might be injurious. I do not know. I am not expert on these things.

A. Is it not a matter of assessing the menace or what objection there may be, and then dealing with it accordingly?

Q. Based on your experience of what is now being put in dumps, do you consider that what is presently being put in dumps gives the neighbourhood sufficient protection with fill?

A. If the fill is progressive.

BY THE CHAIRMAN:

Q. Then the answer is "Yes"?

A. I think the answer is "Yes" in the light of expediency of the action.

BY MR. MACAULAY, Q.C.:

Q. Oh, dear; what does that mean?

A. You have to dump?

Q. But in a residential district. Is it not a question of weighing the expediency on both sides?





A. Yes.

Q. I have no particular budget to carry, but I am endeavouring to elicit from, shall we say, the "horse's mouth", what the situation is.

We have some information that dumping is contemplated along the Old Weston Road district, in Mount Dennis.

MR. CASHMAN (Deputy Reeve, York Township):  
In the Eglinton flats.

MR. MACAULAY, Q.C.: I do not know whether there is unsightliness, what you call the "aesthetic side", but other matters have some other contents, I presume, odours?

I would judge, from what you say, if you put a progressive fill over it, despite that there are odours, you say they are not injurious?

THE WITNESS: No, not if the fill is adequate.

BY MR. MACAULAY, Q.C.:

Q. So we are safe in saying if there is smelling, the fill is not adequate?

A. Yes.

THE CHAIRMAN: Does that complete the Doctor's report?

MR. MACAULAY, Q.C.: I know you are anxious to move on, but he is here, and I thought I would ask



a question or two.

BY MR. MACAULAY, Q.C.:

Q. You think the locating of dumps must be determined by weighing the expediency, secondly you feel the method of dealing with the dumps with progressive sanitary fills gives reasonable protection to the people in the area, and, thirdly, if it is properly done, it will not smell?

A. If it is done properly.

Q. Then may we assume, if it does not smell, it is not releasing any pollutants either?

A. Broadly speaking, yes.

---The witness retired.

THE CHAIRMAN: Do you wish to say anything, Doctor Ward?

D O C T O R S. W A R D,

associated with the Department of Health, city of Toronto, appearing before the Committee, but not being sworn, deposes and says:

BY THE CHAIRMAN:

Q. We will be glad to listen to anything you have to say, Doctor Ward.

A. I think Doctor Pequegnat and Mr. Macaulay have



done a good job.

There is, however, one thing: we can show you an area which has been filled in, under the authority of somebody who had a great deal of earth and other materials to dump, and filled in an area which was giving us some problem from an odour basis. That is opened up again, and they are just dumping it over the side of a hill, with no control.

BY MR. MACAULAY, Q.C.:

Q. Whose dump is it?

A. It is not a dump. It is back of the Canada Packers.

THE CHAIRMAN: There is a nice conservation item there. Between the Packers and the Lambton Roundhouse, we are doing fine.

THE WITNESS: I think most of our work has been more specifically with regard to the abattoir. There has been a great deal done.

THE CHAIRMAN: It is better than it formerly was. I go by there every day.

THE WITNESS: Unfortunately, we cannot do it all in the plant, inasmuch as there are some old sewers there, and we will have to check that kind of business, and put in a sewage disposal plant in that area.

Another thing is the incinerator which we will





be giving to you for a Christmas present.

THE CHAIRMAN: Thank you, Doctor Ward.

BY MR. MACAULAY, Q.C.:

Q. In regard to the present dumps in the city of Toronto: are they all filled with this progressive, sanitary fill?

A. They have been.

Q. Have there been any complaints about the Toronto dumps?

A. No, except for some insignificant dumps, where somebody pops up every night, and dumps something in there.

Q. But no odours nor rodents?

A. No.

Q. Do you not think in regard to this Eglinton flat, that it is not more concerned with the use of the land, than from the rodents and odours, and so on? Is it not more from the aesthetic point of view, to which Doctor Pequegnat referred?

A. I would like to see it handled properly. That would overcome the difficulty.

Q. Does that include compaction?

A. It is generally conceded where sanitary fill has been used, that it has been compacted.

DOCTOR PEQUEGNAT: We have had to watch these



fills for infestation.

THE CHAIRMAN: You have a situation in Riverdale. How is that Greenwood situation?

MR. MACAULAY, Q.C.: I do not have one.

THE CHAIRMAN: You formerly had one.

MR. MACAULAY, Q.C.: Where?

THE CHAIRMAN: On Greenwood.

MR. MACAULAY, Q.C.: That is not in my riding.

MR. THOMAS (Oshawa): They are doing a good job in Oshawa with the sanitary fill. I live in the very progressive city of Oshawa.

MR. MURDOCH: Mr. Chairman, I think this whole thing is for a section of our Department of Health, which looks after that. In my own area, we have the same difficulty. In some of the rural and smaller towns, it was considered they could dump out in an open field, and it did not bother anybody.

But there again, when the people complained about what the municipality is doing, we sent an inspector down there, and he talked with the officials of the municipality, and I believe action was taken by the Department of Health, plus the fact that these machines are becoming more easily available to different municipalities, and I believe that in five or ten years, sanitary fill with compaction will be in effect, even



in the small towns and farm areas. ~~Before close~~

Before we close the meeting, I would say --

THE CHAIRMAN: We are not closing the meeting yet.

MR..MACAULAY, Q.C.: Make your statement anyhow, because I am sitting here anxious to hear it.

MR. MURDOCH: The seriousness of air pollution and its effect on health was discussed this morning, and I think it is admitted, that it is injurious to health.

I think we should bear in mind the survey which has been made for the last year and a half by the Air Advisory Board of the International Joint Commission, and I believe in these studies much more money has been spent than this Committee is spending, and they are just investigating the effect of smoke and air pollution on health.

Knowing what is being done in my area, I know a good job is being done there.

When an interim report was issued some time ago, at that stage, it was found that smoke and air pollution was not injurious to health. I think we will have to base what we say and what we <sup>do</sup> say on something pretty solid, and there it is. The interim report says that apparently there is no ill effects.





MR. MACAULAY, Q.C.: But is it not inconclusive?

DOCTOR EVIS (Secretary): It is inconclusive, I think.

MR. MURDOCH: As time goes on, if you study this for fifty years, it would be better than to study it for only one year.

MR. BELYEA: Did it not say there were certain specific effects? Nobody can judge if there is a cancerous pollutant in the atmosphere.

MR. MURDOCH: These have these families which are being investigated and questioned at regular intervals as to the incidence of colds, asthma, and so forth, and the general state of the health of the families, and so forth. That is being done in a very thorough way.

MR. MACAULAY, Q.C.: Doctor Pequegnat raised the question of "tolerance". I would like to read that report, but I would suspect, having listened to the medical men, that the evidence is inconclusive. You must prove that a man is not sick; you cannot assume him to be not sick. That is the law. But in this case, the question there as raised by Doctor Pequegnat is a question of a localized problem, where people in one locality may have obtained a tolerance which others in



another locality might not have attained, and then the damage is done.

DOCTOR PEQUEGNAT: Theoretically, that is true.

DOCTOR EVIS (Secretary): Perhaps you were not present when Doctor Katz commented that the findings were inconclusive, because they have found that areas which they take as unpolluted, or relatively less polluted, are, in fact, more polluted than other polluted areas at certain intervals, therefore, the study has a fallacy in it.

MR. MURDOCH: I think we should wait for that report, and not be too specific in what we say until we have the benefit of that study.

I appreciate that is from the chemical industries in Los Angeles, but it could happen in Sarnia, and I believe there are records to prove that.

I am living alongside all kinds of pollution, such as we have along the Detroit River, from steamships and factories, but no specific pollution has been mentioned.

DOCTOR EVIS (Secretary): You remember Doctor Kay mentioned the unpolluted areas were too close to the polluted areas, and he said they were to ascertain that even the farmers in an area can suffer from air



pollution, almost as much as the city dwellers.

THE CHAIRMAN: Thank you very much, Mr. Murdoch, and Doctor Ward.

---The witness retired.

THE CHAIRMAN: We have Doctor Fisher with us today. He is the Associate Professor of the Department of Physiological Hygiene in the School of Hygiene in the University of Toronto. We all enjoyed reading his report last September, and I think all members of the Committee were furnished with a copy of it.

I wonder if Doctor Fisher would like to come forward at this time, and make a comment or two on the general problem.

D O C T O R   A .   M .   F I S H E R

Associate Professor, Department of Physiological Hygiene, School of Hygiene, University of Toronto, appearing before the Committee, but not being sworn, deposes and says:

BY THE CHAIRMAN:

Q.        Would you like to make a comment or two, Doctor Fisher?

A.        I do not think you should let Doctor Pequegnat go. My interest is that of a chemist, rather





than a physician, so that is a good reason for referring any comments to Doctor Pequegnat.

I might point out that I have no prepared brief such as Doctor Pequegnat had. I can only tell you rather briefly what we have been doing in the School of Hygiene.

Our interest in atmospheric pollution stems from some work which was initiated by Doctor Barrett, at the insistence of the Director, Doctor Fitzgerald and Doctor Cunningham of the provincial department.

Doctor Barrett is interested in measuring dust fall in three or four areas in Toronto. The work has continued for about two years.

In 1953, the late Doctor Solan extended his operations for a period of years in the western section of the city.

More recently, in the last two and one-half years, we have been supplied data, partly by the city of Toronto, and more recently by Metropolitan Toronto, and partly by the School of Hygiene, and we have been able to understand the measurements of dust fall, including some twenty situations in the Metropolitan area.

We have also been able to measure sulphur dioxide in one area in Toronto, and suspended particulate matter in the air in two areas in Toronto. These two



areas will shortly be extended to seven, in the particular studies going forward in the School of Hygiene.

I try to report at various intervals, generally about every six months, and the last report was made yesterday to Mr. Belyea's department in Metropolitan Toronto.

This report we are preparing deals mainly with dust fall. It measures the tons of dust which fall on an area, and I think about the quickest and most simple and cheapest programme may be to try and do something about atmospheric pollution.

We have not made any attempt to get into the effects on health, which this dust may or may not have. But, it seems to me, it is a long-term experiment, and, as Doctor Pequegnat has pointed out, is a very difficult one.

I question whether we should wait for the results of the experiments to try and do something about the dust -- that is, the ordinary dust -- which settles on a city.

THE CHAIRMAN: Just one comment on that, and speaking as a layman, coming into downtown Toronto every day, you do not have to be a medical man to realize that the accumulation of dust, fly ash and dirt is detrimental



to health, because it is hard to breathe, if you get too much into your lungs.

So far as my personal health is concerned, I can say it is detrimental to my health, because I cannot breathe if I get too much of it. It is a health factor for Cowling; that is sure.

THE WITNESS: If it had no effect on your health, would you object, because you do not like it, just as you do not like dirty water? It seems to me, the actual basis for any of us who are interested in atmospheric pollution, is to proceed --

MR. MACAULAY, Q.C.: That is a good point. I suppose there would be nothing wrong with our drinking our own bath water. It would not be injurious to health.

THE WITNESS: I am not so sure it would not be injurious to health to bottle the excretions from some ordinary animals.

THE CHAIRMAN: We had it pointed out in New York, it would be perfectly all right.

THE WITNESS: Yet, we do not like it.

THE CHAIRMAN: It would not kill you?

THE WITNESS: No.

MR. MACAULAY, Q.C.: It would not appeal to me.





THE WITNESS: No. I think a change is made as you proceed from the boundaries of the city of Toronto to another part of the city.

If you have some figures which have been collected for the Toronto area, you will have noticed in the extreme northern section of Metropolitan Toronto -- and I mean right out at Steeles Avenue -- the dust there is on the order of 12 or 13 tons per square mile per month. If you come down to this area, it is something in the order of 25 or 30 tons. Then, if you go into other areas, it may be three or four times as high, and it has been up to ten times as high. That, in itself, is an observation, as most of you know, from this tabular form which has been proven.

There is another observation which has been made, and it is this; if you look at the analytical records of dust fall, you will find dust fall in the border areas of the city is largely uncombustible material. It is matter which is raised from storms, or something of that nature, and about 13 percent. is shown at the northern end of the city to be uncombustible material.

If you get down to the central part of the city where dust and ash is a combustible part of the pollution, you will find that it rises to something on



the order of 40 percent. In other words, much of the material which has been discharged into the atmosphere could have been burned; it does not need to be discharged into the atmosphere.

If you have an opportunity to look at the figures, I think you can see other materials, which are not appreciated too much, but which are important.

If you take out of the atmosphere all the large particles which settle, and those which can be seen on the street, and can be swept up, you are still left with the small particles which cause the hazy and disagreeable appearance of the atmosphere, to which you referred a few moments ago.

That is borne out in some sections of the city where the dust fall is not too great, but the matter of the suspended small particles in the atmosphere which is more serious, is much greater. The matter of the suspended small particles in this area of Toronto in the last six months have been noticeably greater than in some areas in a west Toronto section, next to the railway tracks. That appears to be true.

I think anything I can contribute to this whole matter is by surveys which we are making in the city which I am trying to report every six months. I think perhaps I would save the time of the Committee



if I stopped talking, and suggested they perhaps will find something in the reports as to what I am trying to do.

THE CHAIRMAN: Thank you, Doctor Fisher. There was one question I was going to ask.

BY THE CHAIRMAN:

Q. Do you think that probably you could use a grant for air-pollution research in Ontario, to perhaps expand the scope of your activities in regard to other pollutants than dust fall? How much would you require, roughly, for that? We are speaking of money now.

A. Mr. Chairman, we have been giving some thought in the School of Hygiene to that matter. It seems to me that is an area which should be investigated.

The matter of dust fall is something which has been with us since Queen Elizabeth's time, and it is a difficult thing to say, but my latest report points out the danger of making these comparisons. Even if we cleared up all of the dirt, we would still have pollution.

Q. Will you send me a copy of your report?

MR. MACAULAY, Q.C.: Will you send us enough so we will each have one? I am one of your most avid readers, and have been for a long time.

THE WITNESS: Thank you, Mr. Macaulay. I will





send you two copies.

It seems to me the area of research on which we are doing nothing at the School of Hygiene at the moment is the matter of the gaseous pollution, particularly from oil-burning engines and diesel engines.

I have spoken to Mr. Belyea from time to time, and have visited two or three centers where they are doing research, and I have quotations on scientific equipment from some of the supply companies.

There are two problems in connection with this. One is the matter of equipment. Most of the equipment for determining gaseous discharges costs about \$10,000 or \$15,000. Then there is the matter of the interpretation of the results. Apparently it is not completely clear yet regarding the absorption experiment, which appears to be one way of attacking the problem, then you can make precise statements, even after you have these experiments. There is still a considerable amount of work being done in Los Angeles County, and it appears to be the most fruitful line which should be followed. I would like to see it followed in the School of Hygiene. But it is an expensive matter. \$25,000 would not more than get one started during the first year. In the second year, perhaps the expenses would not be so high, because you



would not have to purchase additional equipment.

MR. BELYEA: In addition, what personnel would be required?

THE WITNESS: It would take two scientists, one fully-qualified in the use of the infra-absorption spectromometer of suspension.

MR. MACAULAY, Q.C.: Can you give us a rough idea of the set-up you would design, if you could lump together these items, and a lump sum was given to you?

THE WITNESS: I think something in the order of \$25,000 in the first year, and perhaps about \$10,000 per year after that. Our expenses for supplies would be very small. Our supply would be the air, and so forth.

MR. MACAULAY, Q.C.: I would like this Committee to know that I have never said this to you; I have never had the pleasure of meeting you, but when I first became more concerned was when I read one of the first reports, in which you announced that Eastern Avenue, which is in my riding, had by far the heaviest fall of any place in the city.

I, therefore, became very concerned about it having been pointed out to me by you. So your report is the real reason why this Committee exists now, and



I would like you to know that I think you have done a great deal of work in this field, and that we are much indebted to you.

THE WITNESS: Thank you, Mr. Macaulay.

MR. MACAULAY, Q C.: You say the analyses of these machines creates a problem. Should not the Ontario Research Foundation be able to determine the results of its own work in Sarnia and Hamilton? Are they not met with the same problem, or is there optimism unwarranted?

THE WITNESS: I am not sure whether they were using these infrared absorption spectrums there.

THE CHAIRMAN: Doctor Evis says they are not.

THE WITNESS: I was thinking of other instruments. If you are thinking of the discharge which comes from combustion engines, there are undoubtedly dozens of compounds which could be considered. If you wish to measure the concentration of these compounds, the most effective way is by the absorption spectrum. You can take carbon monoxide and do a study on it, but is that the bad actor? There may be others for which there is no standard method of analysis. That is the reason for the studies with the absorption spectrum.





MR. MACAULAY, Q.C.: Are they mobile things?

THE WITNESS: They can be. The Los Angeles County Air Pollution people in September obtained delivery of some equipment which was built in Philadelphia for them, and it was said to be mobile. I have not actually seen it in operation.

MR. MACAULAY, Q.C.: If it was not mobile, it would only sample one area. You have to test for this fall-out in other places. What conclusion would you arrive at if you only set it up, for instance, on your own building?

THE WITNESS: I rather doubt that you would get a conclusive test, but it seems to me there are two comments which could be made.

If the equipment does not prove to be mobile, to what extent could you put it on a trailer and move it around the city? There is no reason why it could not be set up here for one month, and next month moved to some other area.

The other comment is this; to what extent would this equipment allow itself to be used for investigating matters such as the discharge~~which~~ comes from internal combustion engines? We hear, for instance, that automotive engineers are working on devices to improve the discharge.



MR. MACAULAY, Q.C.: You mean to make more?

THE WITNESS: I hope not.

I think one of the problems would be the burning of carbon at deceleration, and seeing if means cannot be found to burn that completely, before it is discharged.

Equipment of that nature could be used to experiment on things of that kind.

MR. BELYEA: I suppose you could bring bottles of samples to the instrument, as well?

THE WITNESS: With some of them you could, but most of them might be too lengthy for such meters.

MR. MACAULAY, Q.C.: It would be quite a bottle.

THE WITNESS: Yes. If you have material of insufficiently high concentration, you can bring the material to it.

DOCTOR EVIS (Secretary): When we were in Philadelphia, at the Franklin Institute, we saw Doctor Stevens with his mobile infrared spectrometer, and he backed up over various types of automobile exhausts, and would take samples, from the very old cars which were in new condition, from new cars, and so on.

From that experience, he built up a mobile unit which is mounted on a truck trailer, which they



sent to California for use out there.

MR. MACAULAY, Q.C.: There is no reason to assume they are burning less than the quantity they are using. Surely, the vehicles are more efficient.

THE WITNESS: We really do not know, today. I was wondering what the experiment which created the machine would have shown. Are we getting more exhaust from the cars?

MR. BELYEA: The higher the compression, the more oxides of nitrogen, and they are no better than the old ones.

MR. MACAULAY, Q.C.: What equipment is being used, and what methods are they using to do these tests in Hamilton and Sarnia?

THE WITNESS: I have not visited Sarnia, Mr. Chairman, although I have read about it. I have visited Hamilton, and the dust-fall measurements are being made with cans which are about six inches in diameter and one foot high, and are attached to the Utility poles on the streets.

In Windsor -- and I believe in Sarnia; Windsor, at any rate -- they are using a dust-fall basin which was developed by the city of Detroit. There is a photograph of that in the latest report which I sent you.





THE CHAIRMAN: We have that information, and we saw that stuff, so I do not think it is necessary to explain it to the Committee today.

MR. MACAULAY, Q.C.: I wanted to find out whether Doctor Fisher thought about what they were doing in Sarnia and Hamilton, by using the equipment they were using, and whether he considered it would produce reliable results.

THE WITNESS: That is a subject which has been discussed at a couple of meetings of the Air Pollution Control Association.

I think the most we can say is that different equipment does produce different results. Which one is right is the question. The danger is we may take results from Toronto and compare them with Pittsburgh, and say that Pittsburgh is better or worse than Toronto, without a knowledge of the different effects these pieces of equipment have.

If we want to make such a comparison -- and I think they are made for publicity purposes -- I think we have to make sure of certain factors, and these are set out in the report which I will send over.

BY MR. MACAULAY, Q.C.:

Q. Do you consider the method pursued in Sarnia is likely to give results which are desirable, and which



fairly test the pollution?

A. I think they would likely test the results in one or two years.

Q. Have you seen the report from Sarnia?

A. No, not Sarnia, but I have from Windsor. I believe they are using similar equipment.

MR. MACAULAY, Q.C.: Doctor Evis, have you ever seen the Sarnia report?

DOCTOR EVIS (Secretary): Yes.

THE CHAIRMAN: Yes, we have seen the Sarnia report.

MR. MACAULAY, Q.C.: The report produced by the Research Foundation?

DOCTOR EVIS (Secretary): Yes.

MR. MACAULAY, Q.C.: What about the Hamilton one?

THE CHAIRMAN: It is not complete as yet.

BY MR. MACAULAY, Q.C.:

Q. Have you seen this, Doctor Fisher?

A. The city of Hamilton, about three years ago --

THE CHAIRMAN: Do you want the Hamilton story? We have it. You want Doctor Fisher's reaction?

MR. MACAULAY, Q.C.: I want to know what the Ontario Research Foundation has said about their report in Hamilton. You say they have made one report,



and Doctor Fisher has made reference to other tests and other reports, and I am wondering to which report he is referring.

THE WITNESS: Mr. Chairman, I am thinking of the work done by the architects at the time the Property Department in Hamilton brought the Ontario Research Foundation into that area. I have not seen their report.

BY MR. MACAULAY, Q.C.:

Q. Did the Ontario Research Foundation make a report in Windsor?

A. The International Joint Commission, yes.

Q. THE CHAIRMAN: The only final report was on Sarnia.

DOCTOR EVIS (Secretary): Their tests were all relatively elementary, concerning such things as the SO<sub>2</sub>, but they did not cover the complex hydrocarbon situation.

MR. BELYEA: Compared with some cities, such as the downtown section of Pittsburgh, it indicated it was not too bad.

MR. MACAULAY, Q.C.: That is what I am trying to bring out, if they were given a fair test and proper analysis.

Doctor Fisher says they gave good results, and





then he points out the bad faults in interpretation.

MR. BELYEA: I think you are right.

THE CHAIRMAN: Are there any other questions to ask of Doctor Fisher? (No response).

We thank you very much for coming here, Doctor Fisher, and we are looking forward to seeing your next report.

THE WITNESS: Thank you, Mr. Chairman and gentlemen.

---The witness retired.

THE CHAIRMAN: We have had several resolutions from Councils, including Brantford, Welland, Port Arthur and Sarnia, and it may be well to have these resolutions included in the minutes.

DOCTOR EVIS (Secretary): The following is a copy of a resolution adopted by the City Council of the city of Brantford at its meeting held on November 12th, 1956:

"That the Brantford City Council respectfully request the Ontario Legislature to enact legislation to enable municipalities under 100,000 population to pass by-laws to control air pollution; and -

That the Ontario Government establish a laboratory



for the study of air pollution and provide mobile units for the analysis of conditions in smaller municipalities; and -

That other cities and organizations be asked to endorse same."

That was passed by the city of Brantford, and we have received notice that it was passed by the city of Sarnia, the city of Port Arthur, and the city of Welland.

MR. THOMAS (Oshawa): And Oshawa, too, Mr. Chairman.

MR. ELLIOTT: And these cities are willing to set aside a certain portion of their tax rate for that purpose?

THE CHAIRMAN: We can discuss that later on. We just wanted to have that on the record.

We will adjourn this meeting now, and reconvene in Montreal next Tuesday, December 18th, 1956.

- - - -

---Whereupon at 12:00 o'clock noon, the further proceedings of this Committee adjourned until Tuesday, December 18th, 1956, to reconvene in the city of Montreal.

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P R O C E E D I N G S

of the

SELECT COMMITTEE APPOINTED BY THE ONTARIO LEGISLATURE  
TO ENQUIRE INTO CERTAIN MATTERS AND LEGISLATION  
REGARDING SMOKE CONTROL AND AIR POLLUTION IN ONTARIO.

Mr. A. H. Cowling, Chairman.

Dr. F. A. Evis, Secretary.

- - - -

VOLUME XLVI

Tuesday, December 18th, 1956,

MONTREAL, P. Que.

- - - -

R. C. Sturgeon,  
Official Reporter,  
Parliament Buildings,  
Toronto, Ont.





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INDEX OF PROCEEDINGS FOR FORTY-SIXTH DAY

Tuesday, December 18th, 1956.

Crump, N. R. . . . .	3490
	3493
	3501
	3530
Cowling, A. H. (Chairman). . . . .	3491
	3501
Belyea, H. . . . .	3497
	3549
Re: Preliminary Investigation of Possible Expansion of Railroad Electrification in United States. . . . .	3528
Tables therefrom . . . . .	3528(A)
Letter, Spence to Rump, Jan.30,1956 . . . . .	3550

- - - -



F O R T Y - S I X T H   D A Y

Montreal, P. Que.  
Tuesday, December 18th, 1956,  
10:30 o'clock, a.m.

- - - -

The further proceedings of this Committee  
reconvened pursuant to adjournment.

Mr. A. H. Cowling, Chairman,  
Presiding.

PRESENT:

Messrs. Elliott,  
Morningstar,  
Murdoch,  
Gordon,  
Thomas (Oshawa),  
Dr. F. A. Evis, Secretary.

APPEARANCES:

Mr. N. R. Crump,	President, Canadian Pacific Railway.
Mr. George Baillie,	Vice-President, Canadian Pacific Railway.
Mr. Harry Belyea,	Chief Air Pollution Control Officer, Metropolitan Toronto.



N. R. C R U M P,

President, Canadian Pacific Railway, appearing before the Committee, but not being sworn, testifies as follows:

BY THE CHAIRMAN:

Q. Mr. President, if you like, I will tell you a bit about the Committee, and then we can take it from there.

As you know, this is a Select Committee --

A. Do I understand that a transcript is being made of these proceedings?

Q. Yes, everything is taken down verbatim.

A. I just wanted to be sure of where I stood.

MR. BELYEA: If you want to say anything off the record --

MR. THOMAS (Oshawa): It is not a public record; it is just a record for the Committee.

THE WITNESS: I am accustomed to transcripts being made, because I have participated in a sufficient number of hearings before the Board of Transport Commissioners and the House of Commons Committees, so it is not unusual, but I would like to thoroughly understand and to know precisely what is going on.

THE CHAIRMAN: That is what it is. It is a record for the Committee, and everything is being





taken down, other than those things which you may prefer not to have on record.

THE WITNESS: It makes no difference to me. I think this is the first time it has ever happened in this room, to my knowledge.

THE CHAIRMAN: I would not want you to feel we were presuming by taking down these notes in this particular place. Is that what you meant?

THE WITNESS: No. I did not realize this was a hearing before a legislative body.

MR. THOMAS (Oshawa): Mr. Chairman, I do not think this could be considered a public hearing, in the true sense of the word.

THE WITNESS: I have no objection whatever. I merely wanted to be sure of the procedure.

MR. MURDOCH: I think, Mr. Chairman, if you will outline what we have done, it may be sufficient for Mr. Crump.

THE CHAIRMAN: We feel it is very kind of you, Mr. Crump, to talk to us about the situation. Let us all understand that. After all, your Head Office is in Montreal, and we are representing the province of Ontario, and it was felt in the progress we have made, we would like to get your views in connection with smoke and air pollution of all kinds.



In April, 1955, the Legislature of the province of Ontario set up a Select Committee, but it did not operate very long before we had an election, in June, 1955. We were re-appointed in September of that year - 1955 -- and have been very active since that time, looking into all phases of the problem, both in Canada and in many of the larger cities of the United States.

We have all Parties represented on this Committee, Conservative, Liberal and C.C.F., but we do feel that the matter of air pollution is one which transcends all Party lines, and it is just a case of our doing just as good a job as we can.

Naturally, on our tours around Ontario, we have received quite a number of people who complained about all railroads, perhaps with the exception of the Ontario Northland Railway, which does such a good job up there, that is, in the north country.

As you may probably know, a week or so ago, we saw the President of the Canadian National Railway, and then it was felt we would like to talk to you. The Committee felt it would like to discuss the matter with the man at the top, as we could then get the answers, without having to speak to other people. That is precisely why we are here. We want to discuss with



you, if we can, some of the problems the citizens of Ontario have discussed with us, about railroad smoke and air pollution. We have some questions we would like to ask you. We do not expect you are going to be able to answer them "off the cuff", by any means, but perhaps you can arrange to let us have the desired information later on.

Your Vice-President, Mr. Baillie, and I, have discussed the problem a couple of times in Toronto -- when was that? Three or four years ago?

MR. BAILLIE: At least three years ago.

THE CHAIRMAN: I know that I, representing my riding, was very much impressed with the attitude of Mr. Baillie and his associates at that time, and I think perhaps some improvement has been made.

With these few introductory words, I think you have an idea of what we are trying to do.

We submitted an interim report at the last session of the Legislature in March, 1956, and probably this year we will wind up with a final report and making some recommendations to the House for its consideration and, we hope, approval.

Perhaps you would like to say something after that, sir?

THE WITNESS: I do not know precisely what you





had in mind. I realized it was on the subject of "air pollution", so-called, in the province of Ontario.

This is not a new subject to me personally. So far as the province of Ontario is concerned, I have been involved in it since 1943, as I lived in Toronto from 1943 to 1948.

I am in Ontario -- in Toronto and many other parts of Ontario -- very frequently, perhaps as much as I am in Quebec, so I have some conception of what your conditions are there, in most respects.

When I was in the position now occupied by Mr. Baillie, we had many meetings with many people about the smoke problem.

Incidentally, to give you some conception of what I am talking about, I am an honorary member of the A.S.M.E. -- the American Society of Mechanical Engineers. I think Rt. Hon. Mr. Howe and I are the only two in Canada. I have been engaged in mechanical work for twenty-eight years. For twenty-two years I was in the mechanical department of road locomotives.

I do not want to boast, but I think I have run more locomotives in Canada, the United States, and Europe, than any man living in Canada today, and certainly in America, whom I have met so far. That encompasses steam locomotives, electric locomotives,



and diesels, so that, as far as background is concerned, I know what the problem is.

Of course, what you gentlemen are interested in, is not elimination, because you cannot eliminate smoke if you are going to have any industry in your province. Perhaps you will point to Pittsburgh and Los Angeles, but I believe you gentlemen are fully aware of what has been done in those places, and the thing in which you are interested, and in which the Canadian Pacific Railway has been interested for a long while, is smoke, and I may say to you that we have spent a great deal of money on it, in an effort to reduce the smoke as much as possible.

BY THE CHAIRMAN:

Q. To control it?

A. Yes, within practicable limits.

I had a lesson in smoke the other day in the Euston Station in London, and I remarked to the station master, incidentally, a gentleman in a silk hat, that if we had a condition like that in Canada, we would be run out of the country.

Q. Was it very bad?

A. It was very bad. I have never seen anything like it in this country.

But that is beside the point; you are not



interested in the Euston Station, but in Ontario.

The Canadian Pacific Railway has spent a tremendous amount of money in the last twelve years trying to reduce some of the smoke hazard to a minimum.

Q. Would you care to give us an approximate estimate as to how much has been spent over the last ten years?

A. I cannot give you an approximation of that. I know we have hired additional people in Toronto. As I recall, they are working on a twenty-four hour basis as smoke inspectors, and that sort of thing, and, in essence, the total amount spent over that period of time amounts to quite a bit.

BY MR. BELYEA:

Q. Are these men full-time inspectors?

A. Yes.

Q. They are not doing other duties?

A. No.

Q. Nothing but smoke inspections?

A. Yes, at least, all the way out to Kenora.

MR. BAILLIE: They are still doing it.

BY THE CHAIRMAN:

Q. How many are there?

MR. BAILLIE: There is one on each shift, at the Lambton roundhouse, that is three, plus the relief;





plus the travelling fireman who works in the terminals most of the time. At times, we send him to London, Windsor, Trenton and places where there might be some problem, and he goes and checks on it.

Then there are four men employed the year around, ever since Mr. Crump established them some years ago.

MR. BELYEA: What qualifications have they?

MR. BAILLIE: They are firemen.

MR. BELYEA: Are they professional engineers, either professional engineers or the equivalent?

THE WITNESS: Oh, no.

BY MR. BELYEA:

Q. You never put that type of person on?

A. No. Consequently, I assume that under your legislation in the province of Ontario, they cannot give evidence personally, but I happen to be able to, because I am a professional engineer.

BY THE CHAIRMAN:

Q. What was that, Mr. President? If they are not professional engineers, they cannot give evidence?

A. You fellows know your legislation better than I do, but, as I recall, in Ontario, unless a man is a professional engineer, he cannot give evidence on engineering matters in court.



It is the same as a doctor or a lawyer; unless you are a member of the legal profession, you cannot practice, and the same with the medical profession. Is that not the situation in Ontario?

MR. MURDOCH: No.

THE CHAIRMAN: That is news to me.

MR. MURDOCH: That has been done by the profession. It was not considered by the Legislature.

THE CHAIRMAN: In any legislative committee, they do not require that standard.

MR. BELYEA: Regarding the Professional Engineers Act; I know that a man cannot call himself an engineer, nor act as an engineer, unless he is a member of the Association of Professional Engineers.

THE WITNESS: Perhaps that is the point upon which I am confused, but I know we had to change the title of an engineer in Toronto, because he was not a member of the Professional Engineers.

Right across Canada, we insist on all our division engineers, and members of the engineering department, be professional engineers, for the purpose of presenting evidence. Just what the background is, I do not recall at the moment. It is a good many years since I have looked at it.

But that is immaterial. The point is these



fellows, who are firemen, in the Toronto terminal and Lambton, are qualified men.

There again, I speak with some authority. A professional man does not know what firing is all about, because he never had to handle one. All he has to do is measure it with a Ringelmann Chart -- sure, anybody can do that.

MR. BELYEA: I think I will have to agree with you, but in order to eliminate smoke --

THE WITNESS: They have all the resources of the Canadian Pacific Railway behind them.

MR. BELYEA: I had a visit to the Lambton roundhouse in mind. I never had much of an opportunity of getting in with a railway and learning what they have been doing, but, apparently, some of the simplest things have not been done.

THE WITNESS: Not been done?

MR. BELYEA: I spoke to one man -- I do not know the name -- a travelling fireman. There was no way of noticing the ignition from the exhaust by way of observation, so the stoker could not adjust the air properly to control the smoke. If there was such a thing as a roof opening, with some electronic device, they would be able to tell whether they were making smoke or not.





He said the only time he knew if there was smoke was if somebody telephoned in from outside, or somebody outside the roundhouse saw it.

THE WITNESS: That is why the smoke observers were put on.

They tell me that sort of equipment is standard on large power houses, and, as I recall it, is on the Toronto terminal power house, but I never heard of it being applied to roundhouses before, at least, to any extent.

MR. BELYEA: I have read that in Indiannapolis they use electronic devices, and they, at the same time, put an opening through the roof.

THE WITNESS: The purpose of a roof is to protect the workmen inside, and the ventilators draw up a good deal of it, but I do not know whether they would "go along" with an opening in the roof.

MR. BELYEA: I was thinking of the outside of the cab windows. One of the standard requirements in almost all set-ups is that there be mirrors or some means of observing the stacks. In a good many cases, they put television sets outside.

THE WITNESS: May I ask how comprehensive your investigation is? I spend a great deal of time on the 16th floor of the Royal York Hotel, overlooking



the harbour and the lower part of the city, and I wonder what your terms of reference are? Do they concern air pollution in Toronto -- period?

THE CHAIRMAN: No, air pollution in Ontario.

MR. BAILLIE: Does that cover ships in the harbour?

THE CHAIRMAN: Everything; it is all-comprehensive.

THE WITNESS: Automobiles?

DOCTOR EVIS (Secretary): Yes.

THE WITNESS: And diesel locomotives?

THE CHAIRMAN: Yes.

THE WITNESS: That is the most deadly, because it is invisible.

BY THE CHAIRMAN:

Q. We know you are proceeding with a dieselization programme, and we know that is one of the answers to the smoke problem. There is no question about that. I see it every morning when I go to the office, that is, that the diesels are not sending out smoke, while the coal-burners are.

Could you give us some idea of your dieselization programme?

A. I understand the Committee is dealing with air pollution, and not only smoke? We have some knowledge



of air pollution.

Q. The broad programme?

A. There has been much work done on pollution, for instance, in enclosed spaces, such as tunnels, and so forth, by the use of diesels. Our Chief Medical Officer has a tremendous amount of material on that. We are involved in that in British Columbia, where there is a tunnel one-half mile long, and it is all diesel-operated now. Previously, they had steam locomotives.

The question the Brotherhoods have raised, is the question of air pollution, and that has been extensively investigated in the United States and Switzerland, and I believe, some parts of England.

MR. BELYEA: I am glad to know you have gone into that, and that your Company has understudied the diesel problem. Who is your medical officer?

THE WITNESS: Dr. Earl White. He has had extensive experience, because he is the Chief Medical Officer for the Airlines, and aeronautical medicine now is a highly-specialized branch, as you can understand.

The dieselization of the Canadian Pacific Railway is progressing as rapidly as our means will allow. We have 670 diesels on the system now. The capital invested in these locomotives is about \$140 million,





and by 1957, we will have another 160 locomotives, which are costing about \$32 million.

In addition to that, we are, in many parts of the country -- and right out of Toronto -- a point which you should not overlook, because when you speak of "dieselization", you generally refer to locomotives -- but we are operating our D.C. cars out of Toronto, with two small diesel engines on each car.

We substituted a steam train our D.C., from Toronto to Windsor, and through to Detroit, and we have a large number of these on order, which also tends toward the elimination of smoke.

You will have some idea, from the figures I have given you, of the tremendous capital investment which was found necessary. As I say, in 1957, we have already allocated and have on order, \$32 million worth of diesels. That is only a small part of the capital programme which we must carry on.

We are handling, of course, our freight programme, and passenger -- what we call "road" -- and we are being subjected, of course, to great pressure in regard to grade-crossing elimination, and while we have increased the grade-crossing expenditure somewhat, it still costs a great deal of money.

I would be simply delighted if we could convert



completely to diesels next year.

BY MR. MURDOCH:

Q. Is it your long-term objective to completely eliminate all smoking engines?

A. Yes, and we are doing it as fast as we can.

BY THE CHAIRMAN:

Q. Mr. President, on that point, just one question: why do you not move the coal burners up into the north country, and move the diesels into the down-town urban centres?

A. It is purely a question of economics. As we become more fully dieselized, that is what will happen. You can only justify being a private enterprise if you have a little more than one dollar at the end of the year for every dollar you spend. It is just that simple.

We can only justify diesels, because of the tremendous capital cost -- and incidentally, two of the diesel manufacturers out of three in Canada are located in Ontario -- but we can only justify dieselization, where we get complete utilization out of it.

In other words, you have to keep them running. In regard to our yard switchers and shunters; we try to put them on jobs where they will work twenty-four hours a day, seven days a week.



To give you some idea of the flexibility of the diesels; we put them in yards, and they work twenty-four hours a day, seven days a week. We only take them off for two shifts, sixteen hours, a month, for servicing.

We put the diesels on here in Montreal, and they go to Vancouver and return.

Q. The same diesel?

A. Yes.

BY MR. BELYEA:

Q. I have heard it was well, as a matter of security, to maintain some steam engines, in case there should be a shortage of oil.

A. I understand that Canada has two-thirds of the world's output of oil, and they are working all the time developing new fields. I understand in Alberta they are bringing in new wells all the time. I was in Saskatchewan the other day, and I was told that by 1957, there will be sufficient oil to last for a considerable time. And Manitoba is also developing oil wells.

Whether, in the national interest, steam locomotives should be maintained, is another thing.

Q. You do not think by the change-over to diesels, you will run short of oil?





A. I have no fear of that in Canada, with the oil potential coming in.

BY THE CHAIRMAN:

Q. Would you care to give us an estimate of when you will be completely dieselized, insofar as the urban centres are concerned?

A. The urban centres will be a question of judgment as we go along.

I have advised our shareholders, at the annual meeting in May of this year, that we anticipate being completely dieselized in five years. That is the objective toward which we are working.

Mind you, probably we will maintain steam facilities in some sections of the country, perhaps, as you say, "up in the bush", for instance, around Lake Superior, although, unfortunately, that is the worst place we can operate steam locomotives, from an economic viewpoint. We may do that, as a sort of a safety valve for the utilization of diesels.

Q. As your diesel programme becomes closer to a reality, what would you do with the old Lambton roundhouse, which is the one with which I am familiar?

A. It will ultimately be scrapped.

Q. There will not be a roundhouse there?

A. We will suspend facilities right across the



country. For instance, the Outremont roundhouse out here, has been a source of contention for many years, and is now rented to some industrial concern for storage facilities. That was a problem, before the construction of the St.Luc yard where we transferred our small facilities out to one large facility, in the northwestern section of the city. There is a modern roundhouse out there, and right alongside of it we have built a modern diesel shop.

The same holds true in Toronto. Ultimately, the Lambton roundhouse in Toronto will disappear.

BY MR. MURDOCH:

Q. I do not think Mr. Cowling has heard anything which will make him happier than that at some time in the future, the roundhouse smoke will disappear.

A. Is that in your riding, Mr. Chairman?

THE CHAIRMAN: Yes.

THE WITNESS: I can well understand your feeling.

BY THE CHAIRMAN:

Q. Would you like to comment on this 1908 Order, under which you operate, federally? The Committee has spoken with Hon. Mr. Marler, and the Board of Transport Commissioners, and in the event the Committee should recommend legislation to the Ontario government,



insofar as trains are concerned, would you care to give us your views on that? There are a couple of good questions.

A. Yes, those are delightful questions.

Q. We would be glad to have your comment on it.

A. You have to bear in mind that this is an "off the cuff" comment, because I have not had an opportunity of giving it any study, or of consulting our legal department.

I have no idea, at the moment, what we would do. It would depend on what form the legislation was in, and how severe the legislation is, that is, from a practical point of view.

There is a theoretical viewpoint there, with another aspect to look at -- and I can do no more than give you an offhand observation, because I have not thought of it -- we would have to look long and very closely at any legislation provincial-wise, whether it be Ontario or any other province, which would attempt to override our federal control.

Our Charter, of course, is federal, and our control, under the law, rests with the Board of Transport Commissioners.

Now, it seems to me -- and here again I emphasize it is not a considered opinion, but a question





you have just flung at me -- but it seems to me we would have to look at any particular Order which concerned smoke very carefully, because our responsibilities are fully delineated.

I do not know of any organization in this country which is regulated to a greater extent than the railways -- and I am quite open to challenge, if anybody wishes to challenge it -- or whose operations are dictated to the smallest detail by the federal level.

You have seen a copy of the Railway Act with all these various amendments, and if we are going to have ten provinces also legislating on every conceivable subject -- and smoke is only one of many -- then we will have to look at it very closely to see what our rights are.

That is as I see it.

BY MR. BELYEA:

Q. In the United States, the railways all come under the jurisdiction --

A. Are you suggesting a change in the British-North America Act?

Q. No, I am asking the question. The railways have been able to conform to these local by-laws to the satisfaction of the officials.



Do you know of any reason why that cannot be done here, why the railways could not conform to local by-laws?

I do not see how you can police anything unless you have a local by-law to observe.

A. You are getting into a very large question at the moment, I would say.

Under the Constitution of the United States, the residuum power rests with the State. In this country, indeed, in all of British North America, the residuum power rests with the Federal government.

For instance, consider highway transports: that is under interprovincial jurisdiction. What is the status of the interprovincial transport at the moment?

MR. MURDOCH: A state of chaos, I would say.

MR. THOMAS (Oshawa): In a state of flux, anyway.

MR. ELLIOTT: Does not the Act of 1908 only apply to the province of Ontario?

THE CHAIRMAN: It is a Federal Act.

MR. ELLIOTT: Every province works under the same Bill?

THE WITNESS: Yes.

BY MR. ELLIOTT:

Q. We have been around the country, in the



United States and Canada, quite a bit; do you not think that the downtown area of Toronto is probably the dirtiest point in Ontario?

A. I disagree. I do not think it is the dirtiest area on the continent, and I do not think it is due to the railways.

Q. Others say it is, 100 percent. --

A. That is what you say their descriptions are. We have some blame, of course.

I could name you three buildings, but I will not do it, because probably that is changed, but I can name you three buildings which were/as bad as any steam locomotive, and it went on for years.

Q. In the city of Toronto?

A. In the city of Toronto, yes. But that is beside the point.

What you gentlemen are after is to reduce the smoke from the railways to a minimum. What are you doing about the smoke from the Seaway?

Q. The same thing applies there. Their diesel programme is the same as yours. They are changing from the old ships to the new, and they will do a better job.

A. This is beside the point, but I do not want to depart from the question of railways. However, I





have been up and down the canals a good deal --

Q. I am not speaking of the canals; I am speaking of the Canada Steamship Line --

A. No, I am speaking of the Norwegian and German lines. Outside of the Swedes, I do not know of anyone who has done any dieselization.

Q. The Swedes have dieselized?

A. Oh, yes, they have been doing that for years. Just take a look at the Swedish ships --

Q. You have ships operating up and down the canals?

A. No, we have only two, and they are operating from Port Colborne to Fort William.

Q. You have no freight boats at all?

A. They handle package freight, but fundamentally they are passenger boats.

We have a diesel-operated coastal ship we built for the west coast a short time ago, and we operate ocean-going ships.

Q. I do not represent Toronto; I represent Hamilton, and I would say you have done a fairly good job in Hamilton. I think you are 100 percent dieselized there now.

A. Pretty well.

Q. There may be the odd ship --



A. May I ask how you propose to handle these foreign flag ships?

BY THE CHAIRMAN:

Q. Yes, I will tell you how we propose to handle them, Mr. President. I am glad you asked that question. We are going to the local municipalities -- say, Hamilton -- when we have authority under the provincial Act, where there is something which is a nuisance, or detrimental to health, or something over which we have control province-wide, and if there is a ship tied up at a dock, or within reasonable areas, which does not comply with the local municipal by-law, they will be charged, and if convicted will be fined; the first fine could be \$100.00, the second fine, \$200.00 --

A. I agree it is not a matter which concerns us, but I was wondering about the law.

Q. Maybe you do not know it, but very recently in Windsor, the local smoke officer there secured a conviction against a steamship in the harbour of Windsor, and they paid a fine, and the condition stopped. That was a good precedent.

A. That is very interesting, because I have wondered about that for some time.

MR. BELYEA: May I add that I understand that foreign ships which are going into the harbours



at New York, Boston, Baltimore and other places, have to conform to their by-laws, and I think there is no reason when they come into our harbours --

THE WITNESS: Within your municipal limits?

BY THE CHAIRMAN:

Q. If they are tied up at a dock, or within a reasonable distance from the dock. You may have wondered how you can make that "stick". We also asked that question. We understand all the large steamship companies have places of business in Toronto, or Hamilton or Montreal -- at least in Canada -- and you can go to their local office; you do not have to go to Sweden, for instance.

MR. MURDOCH: We receive some support from the International Joint Commission.

THE WITNESS: I am interested in that. I have observed the actions of these ships for a great many years, both here and in Toronto, and at intermediate points, and I was wondering how you could control them because there are a number of foreign-flag ships, in the river and the lakes.

BY THE CHAIRMAN:

Q. We had a conference with Mr. McLagan, of the Canada Steamship Lines, a week or two ago, and he said they are in the progress of converting to oil, and





when the Seaway is completed, they expect to be all oil --

A. That is, oil-fired; not diesels?

Q. Oh yes, some diesels.

BY MR. ELLIOTT:

Q. Their programme over the next few years is smoke, the same as yours. They are spending a tremendous amount on oil-fired ships. They do have some brand-new ships which are dieselized.

A. The new ships may well be. I think all the coastal ships are dieselized, because that cuts down the engine room staff considerably.

It is too bad, but it is inevitable that these technological changes can only be obtained by reduction of staff.

For coastal work, we think the diesel is the proper ship. For ocean work, we think the oil-fired steam turbines is the logical way, and that is why we built the "Britain", and the "England" the way we did.

Q. I am not trying to tell you how to run ships, any more than the Canada Steamship Lines --

A. The final test is what you have left over at the end of the year.

BY MR. BELYEA:

Q. Back to the interprovincial question; is there



any real difficulty with trucks between the provinces by virtue of the fact that they are under provincial control?

A. They are, except in Quebec. The intra-provincial trucks are all under provincial control.

You will recall a case which went to the Supreme Court, and then to the Privy Council not too long ago, which was entitled "The Winters' Case", where the Privy Council stated definitely that inter-provincial transport was under the jurisdiction of the Federal government, but the Federal government could make agreements with the provinces to -- I do not know what the legal term is -- but to pass over authority to the provinces, so there is not any provincial control now. Quebec has never been a party to the agreement. I think it is very much in a state of flux.

In the United States, the interstate transports are subject to the regulations of the Interstate Commerce Commission, where, as a matter of fact, the highway operators have to file complete statistics. Any studies we want to make of highway statistics, we have to go to the United States, because there is nothing filed in Canada. The Dominion Bureau of Statistics can give us no information at all. We can



only judge by converting what American figures we can obtain to the Canadian conditions.

Q. We are able to move materials across the provincial borders?

A. Oh yes, but where you get into difficulty is in regard to the licenses.

MR. MURDOCH: They have worked out a reciprocal agreement.

MR. THOMAS (Oshawa): Mr. Chairman, with the enforcement of smoke control, as far as railways and steamships, being a federal matter, I feel there is another matter, and that is in connection with injury to public health, and from that angle we feel the provincial government can operate and enforce regulations which may bring it in under the health angle, in regard to the smoke nuisance.

BY MR. BELYEA:

Q. In connection with that, while the British-North America Act says the railways are under Federal jurisdiction, it provides that civil rights are under provincial jurisdiction --

A. Mind you, I am not disputing it at all, but your Chairman asked me a question. It is just a means of developing that aspect.

Now, I want you to know that the Canadian





Pacific Railway has had occasion to undertake this, and we are trying to co-operate with the Smoke Abatement Committee. That is our policy. We will co-operate in every feasible matter, but if you say we have to lift the steam locomotives out of the country, and take all our steam maintenance facilities out of the country, then I say it will take a little time.

MR. BELYEA: We know your railway has co-operated very well. In fact, I think they have done a very good job, and going back over the last ten years, there have been very considerable improvements made. In the cities, a great many of these "sore thumbs" -- these smoke stacks -- have been cleaned up, and will be cleaned up more, yet the railways do stand out as the most serious offenders, therefore, while we think you have done a good job, we think a very great deal more can be done.

THE WITNESS: How many full-time smoke inspectors have you the year around, in the city of Toronto?

MR. BELYEA: They are short of staff now, but the new provision plans now for a complete staff of 26, who will deal with other air pollution as well.

MR. THOMAS (Oshawa): The situation is changed,



because it is under the jurisdiction of the Metropolitan Council now, or will be in a few days.

BY THE CHAIRMAN:

Q. In connection with your coal burners; a great many of them are headed for the scrap pile, and some people feel that maybe you will not continue giving these coal burners the same maintenance as you have heretofore, because they are going to the scrap pile, and that may be one of the reasons why they are smoking.

Will you comment on that?

A. I do not need to answer offhand. I will give you a firm opinion on that, and I say it is all "rot", because the Board of Transport Commissioners will stop a locomotive immediately it is not in condition to run.

We have instructions issued by the Board of Transport Commissioners, and our responsibilities are very fully laid out, and even if we wished to do that -- which we do not, from a safety point of view -- it would be impossible. That impression is completely erroneous.

Our locomotives are being shopped for heavy repairs, for intermediate repairs and running repairs, exactly the same as they were twenty years ago.

Q. Will they receive the same maintenance until



the day they hit the scrap pile?

A. That is right. Mechanically, they have to be serviced.

When we scrap a locomotive, we try to arrange to scrap it before it is due for a heavy repair job, because a heavy repair job may cost us up to \$75,000 or \$100,000, and it would be poor business to shop a locomotive, and spend \$75,000 or \$100,000 on it, and then scrap it within six months.

To that extent, we try to plan our programme ahead.

There are no locomotives in the condition you suggest. We would not dare to, first of all, from our own viewpoint, that of safety, and, secondly, the Board of Transport Commissioners inspect our locomotives, and when they pick off a locomotive we have trouble on our hands. I have known locomotive foremen to be demoted over that.

Q. Just another question: why do you not use the diesels on the fast runs between Toronto and Montreal?

A. You will have to ask Mr. Gordon that question. Those are his trains, not ours. We are using them on the night pool trains. The reason we do that is because there is a large amount of business between





Montreal and Toronto. The train runs in two sections nearly every night, and carries 15, 16 or 17 cars on each section, and with the steam locomotives, the handling is not as good as it is with the diesels. The steam locomotives have to stop for coal and water, and when you are lying in bed, and perhaps not inclined to sleep very well, any mishandling is quite noticeable, the sensation is greatly exaggerated. With the diesels on, the complaints which we receive have been very considerably reduced.

BY MR. BELYEA:

Q. You use them in the freight service?

A. Naturally. We are in the transportation business. We have only one thing to sell, and that is transportation, and if the public does not buy it, we do not sell it.

There is another little aspect to be considered. We have to provide a product which is available at all times.

If you had been grounded at the Malton Airport, as happened a few days ago in Toronto, you would have noticed that the Union Station was jammed with people, because there were no planes leaving. They all expected first-class transportation. Yet perhaps that was the first time they had been on a train since



they were grounded the last time.

The afternoon pool trains operate over the Canadian National tracks. They operate out of Windsor Station, as far as Dorval, and then go over the Canadian National.

That is a question you will have to ask of Mr. Gordon.

Q. We have asked him.

A. I thought you would.

BY MR. ELLIOTT:

Q. You keep the steam engines around and put mileage on them, before you really scrap them?

A. You get your best economy in the territory where you have your latest steam locomotives, because that is tough territory, so we have had to pull out some of the latest equipment and leave some of the very old ones in on the branch lines because of rail and bridge restrictions.

We are scrapping a very heavy programme of steam locomotives each year.

BY MR. BELYEA:

Q. Have you a programme by areas? Could you tell us when, say, Toronto, Hamilton, London and Windsor -- or some of these areas -- will be dieselized? Are there dates for those?



A. We have no specific programme by areas. We followed many of the Class I railways in the United States, when we commenced to dieselize, because we did the work by areas, but in a short time we had to abandon that, because the utilization of diesels is such that they are most suitable for long runs.

When I worked in the roundhouse, a locomotive ran 120 miles with freight, then it was increased to 400 miles, and then we stepped them up to 800 or 900 miles, and now we are running diesels 3000 miles.

That has pretty much caused us to abandon the purely area conversion -- I am speaking of general dieselization now, not just yard operations.

Q. How would Toronto and Hamilton fit into that programme?

A. I would say high on the list. I would say, as a matter of good, common sense that we have to remove most of the switch engines, where we can put in diesels and use them continuously.

Q. I think the people of Toronto and Hamilton will be pleased to know that.

Getting back to the question of diesels; you and Doctor White must know, if you have studied dieselization in tunnels, that there are some very noxious fumes from diesels which are not properly maintained,





particularly the aldehydes, and oxides of nitrogen and so on. Have you means of testing those?

A. We have very limited means of testing them in the tunnel in British Columbia, or any enclosed space. I do not know how we can test them in the open air.

Q. It has been found, where there are large concentrations of diesels, there are many complaints about them. That is due to many reasons, sticky valves, worn engines, or improper handling by operators. Have you any way of catching one of those engines and correcting a condition such as that, rather than having them go on for two or three weeks, until the next major check period?

A. Yes; there again the manifestation of a faulty engine in the diesels is the emission of smoke, and that is caught readily and reported to the engine men. That is all I know of. I would very much like to have our people examine the evidence from all sides which you have available, and pinpoint air pollution from the viewpoint of the chemicals of which you speak.

Q. I have yet to learn of any place which has any means for checking that.

A. From a practical point of view, I do not know how it can be done.



Q. I expect from some diesel buses which are going uphill.

A. Sure, but how will you separate them? The pollution for which you are looking is invisible.

I suppose you drive an automobile which has a fresh-air intake.

If you are interested, let me suggest you drive up Avenue Road as I do frequently, as I have a daughter living in Toronto, and in driving up Avenue Road in heavy traffic, how often do the drivers have to close their fresh-air intake? I do it frequently. But how will you separate them to ascertain from where the air pollution is coming.

BY THE CHAIRMAN:

Q. How first problem is smoke, as you say, and if we could do something about that, then we would move into the other area.

A. You will have a rather big problem on your hands when you move into the other area.

BY MR. THOMAS (Oshawa):

Q. I agree with you. Many people think that with the elimination of black smoke, our problem is solved, but then we have a much greater problem, that of air pollution, and with the complete dieselization of railways, then we are really jumping into something.



BY MR. BELYEA:

Q. Have you laboratory facilities for testing these oxides of nitrogen and aldehydes?

A. No.

Q. That has been worked upon by the United States Bureau of Mines.

A. We have means of testing it out in the British Columbia tunnel.

Q. That is, out of the stacks?

A. No. The concentration in the tunnel.

Q. Would it not be worth-while to have some equipment in your service roundhouse, so an engine could have a quick check for oxide gases, to make sure it does not go out on a run in that condition?

A. If you want the viewpoint of a practical man, no.

BY THE CHAIRMAN:

Q. Many people seem to have the idea that that is one of the reasons why you do not get the smoke in downtown Montreal, because many of the trains are brought in with electrical equipment.

Would you care to give us your views on electrification, whether that is a practical way of eliminating or controlling this problem?

A. I take it you were speaking about the Canadian





National Railway. I cannot speak with any authority about them. We do not. Our trains are brought in by either steam or diesel.

The Canadian National trains are brought into the station by electricity or diesel. They change at Turcot.

Personally, I think that electrification is something which is a very interesting subject. I had a long talk a short time ago with the President of a United States railway, which is doing a great deal of electrification, but I cannot say that electrification is the answer in this country, which has something less than 16 million people in it. I do not think we can afford the luxury of electrification yet. It is purely a question of traffic density.

Q. And more expensive?

A. Oh, yes; the capital cost is exceedingly heavy. For instance, take a look at your Hydro-Electric supply in the province of Ontario -- I am speaking of western Ontario, from the border through to Windsor, and I think probably Mr. Hearn, and Mr. Duncan, would not want to see the railways electrify now, until they get in a greater power supply.

But, quite aside from that, I do not see any electrification in the immediate future.



BY MR. BELYEA:

Q. I think every place has its problem.

I have here a document called "Preliminary investigation of the possible expansion of railroad electrification in the United States" by the Battelle Memorial Institute, dated April 23, 1952.

In the research programme, an analysis was made of the investment cost of the various components for an electrified railroad. For purposes of evaluation, the costs of various suggested developments that were studied were compared with those of a cost estimate of electrification on a 400-mile section of multiple-track railroad.

In addition to the search for methods for reduction in the capital cost of electrification comparative data were assembled on the operating costs of the three forms of motive power. A survey was also made of the outlook for the supply and the costs of fuel, coal, diesel oil and electricity for the period 1950 to 1970.

By 1970, electric-power costs in terms of the 1950 dollar will be possibly as much as 10 percent below present levels, whereas diesel fuel costs are expected to increase by possibly 25 percent to 50 percent.



Capital Investment

Steam	\$ 77.3 million
Diesel-electric	110.6 "
3000-volt DC	166.7 "
24-KV 60-cycle	150.0 "

Operating Costs (annual):

Steam	\$ 34.8 million
Diesel-electric	31.8 "
3000-volt DC	26.3 "
24-KV 60-cycle	26.1 "

Either method of electrification would result in annual savings in operating costs ranging from 17.3 percent. to 25 percent. in this example, as compared with either diesel-electric or steam operation respectively.

Summary of Costs and return on investment:

The saving over steam of 24 KV 60-cycle electric:

Return on gross investment	3.43 percent.
Return on incremental investment	7.08 "

The saving over diesel electric of 24 KV 60-cycle electric:

Return on gross investment	2.19 percent.
Return on incremental investment	8.33 "

Summary of Evaluation:

Total investment, annual fixed charges and annual operating costs when summarized show that electrification would be the most economical method of rehabilitating motive power in the particular case which was studied here. This fact was also shown in the original study, but the comparison was more favourable now than when the original study was completed.





THE WITNESS: What was the voltage they were purchasing?

MR. BELYEA: 3,000 DC or 24,000, 60-cycle.

THE WITNESS: How much was the AC?

MR. BELYEA: They apparently have not broken that down.

THE WITNESS: I suggest you take a look at Europe, to see what is being done.

MR. BELYEA: Have you anything to suggest there specifically?

THE WITNESS: Yes. Take a look at the French State Railway, the Swedish State Railway, and the British State Railway.

BY THE CHAIRMAN:

Q. Are they all State-operated?

A. We are the only large privately-operated railway in the world.

BY MR. THOMAS (Oshawa):

Q. If the Canadian National Railway can use this electrification system in Montreal, why could not the Canadian Pacific?

A. Just because we have on order 160 diesels, amounting to \$32 million, and I notice the Canadian National Railway is ordering 222 locomotives.

Unfortunately, we have to go on the public



market to secure our funds.

Q. I thought I would give you the opportunity of explaining that.

A. I reiterate I would love to be able to convert to diesels, and I would love to see electrical operations in our heavy terminals, because, from an engineering viewpoint, I know what I could do with them. But, from the management point of view, from where is the money coming?

Incidentally, to return to your question, Mr. Belyea, I do not know whether any of you have been on the British State Railway. I told you what happened in a station in London, and I can give you two more examples.

I rode the cab of a locomotive going up to Newcastle a few months ago, and I rode the French State Railway engine from Paris to Calais. It happened to be a steam locomotive -- there are not too many left in France -- and when the engineer got off one of these two locomotives, and opened his shirt collar, his neck was just black.

The French State Railway is converting to a very high-voltage AC current, and the plan is to spend about 400 million pounds on the British State Railway, but that has not been started as yet.



It also calls for the conversion of the existing low-voltage DC current in their operations, to the installation of all new electrification with very high voltage.

BY MR. BELYEA:

Q. Why do they use that?

A. For economy, but the figures do not mean anything unless you know how many kilowatt hours is supplied for electric power.

BY THE CHAIRMAN:

Q. Is there a tendency to supply all electric power in France?

A. It is rather amazing. I was surprised to learn of the electric development up in the Sahr; it is electrification like Mr. Hearn contemplated in Toronto.

Incidentally, I have ridden for many years up and down between New York and Washington on the Pennsylvania railroad, which I hold up as an example, and I was amazed when I read of the electric locomotives from Paris to Calais, and to see what traffic they have.

Q. Do you think the supply of electrical power in Ontario, through the advance of atomic energy and so on, will be adequate; is it economical, and do you





expect to see in the future your railroad go in for electrification where practicable?

A. I envisage the day when I will see electrification in both Toronto and Montreal.

Q. You do?

A. Yes, I do. When it will come, I do not know. We have some pretty accurate forecasts now for the next fifteen years.

BY MR. BELYEA:

Q. Is that dependent upon atomic power?

A. No. I think it depends more on the traffic density, and the cost per kilowatt hour of the power supplied.

BY THE CHAIRMAN:

Q. We were down in Philadelphia, where there are twelve railroads, and they are completely dieselized. You might be interested to know that in speaking with some people, we were told they would receive from 40 to 50 complaints a day, but now that they are dieselized, they only receive two or three complaints a month.

We asked them about electrification, but their experience indicated that it just was not practical in the area of Philadelphia, because they felt there was a lack of electricity and the necessary



wires.

A. Philadelphia has some of the same complaints we have here, but in dealing with this railway operation, the trains come into the city from several directions, and they have electrified the terminal, and on the Canadian National Railway the road power is taken off at Turcot. That takes about ten minutes. It is an additional delay.

MR. MURDOCH: Mr. President, I know you have impressed the Committee with what you have done regarding the control of smoke, and we realize that it does cause something that is a nuisance and also that it represents a waste of fuel. We all realize that.

We have had several talks with employees, firemen, and so forth, and I would like to ask you if you have kept copies of any written instructions which go to the men who actually are in charge of the fires, which you give to them in writing, so there is no mistake?

THE WITNESS: Mr. Baillie can supply you with those, because he has supplied them to several committees in Toronto already.

MR. MURDOCH: I think they would be very helpful, in view of the lack of a positive answer to



that question.

THE CHAIRMAN: That is right.

MR. GORDON: In the yard of the Toronto, Hamilton and Buffalo railway in Brantford, there is a residential section, quite near, and there are complaints when steam engines are shunting in the area. There are no diesels doing that work.

THE WITNESS: I think I know what it is.

MR. GORDON: One lady had some washing out and there were some black spots on it, and when she took it in, it looked just as if it were soot.

But what happens with that is that from the diesels little brown spots appear on the fabric, and it is impossible to get them out.

THE WITNESS: That is a new one to me. I thought you were going to say something else.

DOCTOR EVIS (Secretary): I think the lady said she thought with the coming of the diesels, it had something to do with synthetic fabrics. She said she could not get the spots out.

THE WITNESS: That is a new one to me. I have never heard of that. What I thought you were going to say, I think perhaps is apropos to your remark -- speaking of complaints from the public; we have to live with the public, and we do not want any





more complaints than we can help.

It is interesting to note that after we put the diesels out there, the complaints regarding smoke disappear, but they then complain about the noise from the whine of the superchargers.

MR. GORDON: I live in that district. When they get to the crossing, they blow a horn, or it might be a whistle; anyway, it goes "who-o-o who-o-o", and you wish you were going with them.

THE WITNESS: If you want to take a look at the proceedings of the Board of Transport Commissioners, you will see a great deal of that. It is a question of decibels, which is a means of measuring sound, as you know.

This question of decibels in whistling was very thoroughly explored, not only by those who are able to hear the whistle at grade crossings, but by a number of others. The Brotherhood of Locomotive Engineers is very interested in that.

BY THE CHAIRMAN:

Q. You have quite a few lines in the United States; have you any local smoke-abatement problems with municipalities in which you have to operate?

A. Not that I am aware of.

Q. Do you run into Detroit?



A. We operate these .D.C. cars.

Q. Have you had any trouble with the Detroit people regarding air pollution or smoke? I understand they have a strict programme there.

A. I do not recall anything of that.

MR. BAILLIE: The Michigan Central takes us through the tunnel.

THE WITNESS: The tunnel is electrified and has been for a long while.

The last thing I recall about Detroit was the city planning job they did in Detroit shortly after the war. I have not heard anything about that for a year or more.

I was in Minneapolis last week. We operate the "Soo Line", the D.S.S. & A., and the Wisconsin Central, and we operate in Vermont for a short distance, and, to a certain extent, in Maine.

BY THE CHAIRMAN:

Q. Is this the largest private line in the world?

A. That depends on how you measure. From a mileage point of view, yes; from the point of view of gross revenue, the Pennsylvania is the largest.

Q. You are the largest private railroad.

A. From the point of view of mileage. You realize that the large percentage of the mileage in



Canada is state-owned. The Canadian National Railway has more mileage than we have, in Canada.

BY DOCTOR EVIS (Secretary):

Q. You mentioned a roundhouse at St. Luc. Have you a fly ash collector there? Did you fit it into any stack?

A. Normally, there are no fires in the roundhouse. They are lit up outside. We have direct steam in the roundhouse at John Street, in Toronto, and also at St. Luc, where the fire is dumped outside, and steam is supplied to the boilers, and the fire coming up under the steam is lit up outside.

Q. Your operations on the lakefront are so much better than the Spadina situation of the Canadian National Railway.

A. Thank you. We have certainly done enough work on it.

Incidentally, the direct steaming at John Street roundhouse was the first in Canada.

Q. Is there anything done there which is not done at Lambton?

A. Direct steaming, perhaps, would be of help.

BY MR. MURDOCH:

Q. The diesels will change the whole system?

A. That is right.





Q. You will probably refer to it as a "diesel shop"?

A. This roundhouse is not suitable for diesels. That is why we had to build a diesel shop at St.Luc.

BY THE CHAIRMAN:

Q. Have you a diesel shop around Toronto, or one proposed?

MR. BAILLIE: There will be.

THE WITNESS: What have you done there now?

MR. BAILLIE: They are practically going out by the end of 1957. We will have to have a diesel shop in Toronto.

THE WITNESS: We did convert one roundhouse to a diesel shop at Chapleau, Ontario, but I do not think we will ever do it again.

BY THE CHAIRMAN:

Q. Too expensive?

A. I should say so. As you know, we combined several roundhouses in Montreal into the new St.Luc roundhouse in the west end. That is the hump yard, and it is the most modern it was possible to build at the time. We have a problem in Toronto now. We have yards all over the place, and we will have to have a modern yard in Toronto.

We have some plans on that, about which I am



not prepared to speak at the present time, but that would, in itself, eliminate the Lambton roundhouse, quite aside from any question of dieselization.

THE CHAIRMAN: One of the reasons is, I have wondered if you were talking to one of the candidates in the last election, when he said he was going to have the Lambton roundhouse moved. I wondered if he had information I did not.

MR. BAILLIE: It was not too effective?

THE CHAIRMAN: No, he did not make it.

THE WITNESS: There is a solution to this problem. Eliminate your industry, and you will have no smoke.

BY THE CHAIRMAN:

Q. I do not think that is the answer, Mr. President, certainly not the one about which we are speaking.

A. I realize that. I have been dealing with this question a great deal longer than you gentlemen have, I venture to say, in one year, but I deal with it on a nation-wide basis. Some of the representations made to us could only be carried out by taking the railroads out and getting rid of them.

BY MR. BELYEA:

Q. You mentioned the control in Pittsburgh, but they still have their industries. They mentioned one



railway, which, after considerable deliberation, changed over and used a different type of coal.

A. That coal is costing us money. It is all imported American coal, and you do not think we would continue importing American coal unnecessarily?

BY MR. MURDOCH:

Q. It was mentioned in some places that the coal was not doing the job.

In some places, they said they did not have to watch what went on. If it were more expensive, they would watch a little more closely.

A. With the cost of coal as it is today, every pound wasted is a matter of concern. With the rise in prices in the last ten years -- and we have all our coal used in Ontario coming from the United States -- you can imagine how much it is costing us.

BY MR. BELYEA:

Q. I think it was the B. & O. -- were only paying a couple of dollars for coal.

A. The Baltimore and Ohio is on coal mines. They are serving the coal mines.

We will not haul a low-grade coal from Pennsylvania to Toronto, Sudbury or Montreal.

BY THE CHAIRMAN:

Q. I want to assure you on this one point. I





know I speak for the Committee when I say it is not a function of this Committee to put industry out of business. We, in Ontario, know that industry is what makes the wheels go around.

But, at the same time, in the course of our studies, we have found out that every smoke problem can be located, can be controlled, and can be reduced, and I think we have found there is equipment available for nearly every situation, and that industry can do better than it is doing at the present time.

A. I will go wholeheartedly along with you on that. I would not agree with your initial statement, however. It is a matter of degree. Smoke cannot be eliminated. As long as you are burning fuel, there must be smoke, whether you are burning it in an automobile, or what have you. To that degree, I will "go along" with you.

Q. We were in Welland, and industry in that city is doing a commendable job, such industries as the Page-Hersey Company, but there was one spot where we toured around for a whole day, and the smoke was just pouring out.

We said to one of the gentlemen who was with us, the General Manager of Page-Hersey -- "What about



this man?", and he said, "'Charlie' does not care; he says coal is cheaper than putting on equipment to eliminate smoke, so he will let it burn".

I think the industrial men in the area should get hold of "Charlie" and see if they cannot do something about that.

MR. MURDOCH: In the plants which are being built today, it is easier to instal equipment on their smoke stacks than it is on those built many years ago.

In connection with some of the old plants, it is very expensive to put equipment in, so much so, that it is almost economically impossible, and it would work a tremendous hardship on them, and it is difficult to force them in to something which would put them in a poor competitive position.

We have seen some of the equipment, and it is very good.

THE WITNESS: All of the power plants we have built for some years, were built with the equipment installed.

BY MR. BELYEA:

Q. Back to the overseas electrification; has the air pollution and smoke problem anything to do with that decision, or is it a matter of economy?



A. To my knowledge, no. There is a possibility in the city of London, but the pollution from railway locomotives is a very small percentage of the air pollution, when you look upon the millions and millions of chimney pots.

BY THE CHAIRMAN:

Q. Do you think they have made any progress in 350 years?

A. None.

Q. So we have a long way to go?

A. Oh, there is no comparison, when you consider the tonnage of soft coal which is burned in Britain in open grates alone --

MR. THOMAS (Oshawa): That is right.

THE WITNESS: We have a device used in summer cottages now, and that is the heat-a-lator. Would you build a fireplace without a heat-a-lator? Over there, they would not think of that.

BY MR. BELYEA:

Q. They expect to have these fire pots eliminated ten years from now.

A. I will put up any amount of money that will not take place.

Q. I would not put a red cent on it.

A. I looked at a new house with the pipes on





the outside. I said, "Why did you do that?", and they said, "If it freezes, it is easy to get at".

It was a new house with all the new pipe on the outside. This was built when I was there, in July.

BY MR. MURDOCH:

Q. In place of the individual chimneys?

A. I happen to have some personal knowledge of that.

One of our officers lives there, and is a native of that country. He had been to this country a few times, and he wanted some changes made in the heating system of his house, so it would be centrally heated, in a domestic sense, not in a sense where it would be applied to an area, but he could not get anybody in that town of Liverpool to do the job for him. They said, "You do not need that, and we are too busy".

BY MR. BELYEA:

Q. How do you explain the paradox, that they are so advanced in things like machinery, but are so far behind in control?

A. I happen to be a student of English history, and I know a great deal about that.

The French State Railway is the most progressive



of which I know anything in Europe. That is surprising.

BY THE CHAIRMAN:

Q. That is about the only thing in which they are progressive.

A. Oh, they are good, and the West Germany railways are good.

BY MR. BELYEA:

Q. Do they use the diesels?

A. They use quite a bit of steam in Germany.

Q. The Committee drew up a proposed revision, and had a meeting with Doctor Katz in Ottawa. Perhaps we could leave a couple of copies with you.

A. I would like to read it myself, and have some of our specialists go over it.

Q. Will you do that, and let us know what you think of that?

A. I will be glad to. I do not want you to get the feeling we are avoiding this thing at all. We are just as interested in this as you are. My attitude, as a representative of this Company, is that anything that is good for Canada is good for the Canadian Pacific Railway.

Some evidence of that, perhaps, is in the fact that I just had placed on my desk last week, the results of the economic study of Canada as applied to



the railroads, which, to my knowledge, is the most complete economic study ever undertaken by a railway on this continent. We are looking at the next fifteen years in that study.

There are some very interesting points in it, in which I think you would be interested, but I am not at liberty to divulge them at the moment. May I put it this way? You are living in a rich province --

THE CHAIRMAN: Enough said.

---A short discussion was held, which was not reported, by direction of the Chairman.

THE WITNESS: I want you to understand that we are just as interested in this problem as you are, and we would like to help in every way we possibly can, within our practical limitations, and I would like to look this over and have it studied by our people.

DOCTOR EVIS (Secretary): There is a provision in there concerning those diesel engines, suggesting that diesels might not be deemed to be in first-class adjustment and working order, if the exhaust gas contains carbon monoxide of so many parts per million.

That is put in, not as an absolute criterion, but as a suggestion that maybe your engineering staff





could go to work with the diesels, and develop some method of testing diesels to decide when they are not in proper working condition.

THE WITNESS: May I check that~~with~~ with the medical men?

DOCTOR EVIS (Secretary): Certainly.

THE WITNESS: I think we have a good deal of information on that.

DOCTOR EVIS (Secretary): We would be very happy to have it.

THE WITNESS: Doctor White is interested in this problem.

As I recall it, there is some international group which has been interested in this. It runs in my mind, there is an association, I think, in Switzerland. I would have to check on that.

DOCTOR EVIS (Secretary): If you would send us some information, we would be very happy to have it.

I do not want you to think that was laid down as an absolute rule, but it is suggested that possibly some simple method of testing diesel oxides, rather than watching them for visual emissions, could be developed.

THE WITNESS: Perhaps some time when Doctor



White is in Toronto, he might have a chat with you about it. It is more satisfactory to talk with you people.

THE CHAIRMAN: I have met Doctor White at the Exhibition, with Mr. Baillie.

THE WITNESS: The mention of Essex County reminded me that the economic study is under the jurisdiction of the second largest man ever to come out of Elgin, Mr. "Ken" Galbraith. He is a graduate of the Ontario Agricultural School at Guelph, and the University of Toronto. He went to the United States, and is now a Professor at Harvard, and he boasts he is the second largest man to ever come out of Essex County. He is six feet, seven inches, and his father was six feet, eight inches.

BY THE CHAIRMAN:

Q. Mr. President, before we proceed, we would like to invite you and Mr. Baillie to have luncheon with us. I hope you have favourably considered that?

A. I received that invitation in the letter from Doctor Evis, and I was going to have to be in the position of refusing, as I am supposed to be attending a bank meeting, but since I did not make my bank meeting, my next meeting is at two-thirty, and if I can squeeze the luncheon in, I will be



delighted to come along, as I am sure Mr. Baillie will.

THE CHAIRMAN: That is fine.

BY MR. BELYEA:

Q. I have a copy of a letter from your solicitor addressed to the Board of Transport Commissioners, upon which you might like to comment. I do not like to be in a position of saying something against the Canadian Pacific Railway behind your back.

I might go back into the history of this. I met with Mr. Crump at one time regarding the revision of the Order, and sat down with officials of certain municipalities, and we drew up a proposed revision. To get it through, we took it in moderate steps, and modified it. We did not go anywhere near the limitations of the various cities in the United States, and we thought it was a very fair revision, and was something which might go through fairly quickly.

After meeting with both railways, and making some modifications to suit the railways, it was sent into the Board, and it was very surprising to see this letter coming from your solicitor, in which he says:





"

January 30, 1956,

File No. C-28268

C. W. Rump, Esq.,  
Acting Secretary,  
Board of Transport Commissioners,  
Ottawa, Ontario.

File No. 3023 - Application of City  
of Toronto for an Order amending  
G.O. # 18 re Regulations covering  
emission of dense smoke from locomotives  
within municipal limits.

Dear Sir:

We have made a careful study of the regulations proposed by the City of Toronto in its application of November 17th, 1955.

We feel that these regulations would be so restrictive as to interfere with the proper operation of the railway. In some respects, they go far beyond the provisions adopted by the City of Montreal in 1948 by Order No. 70714 which were the subject of long deliberations by the Board, the City and the railways.

Notwithstanding the study given to the Montreal order, one part, paragraph 3, has been found to be completely unworkable in practice and it is our belief that paragraph 3 of Order No. 70714 should be amended by changing the word 'less' to 'greater' in the part within



brackets.

While we are prepared to agree with General Order No. 18 now applicable to the City of Toronto is outmoded, we are very strongly opposed to additional regulations that would go beyond the Montreal provisions, appropriately amended in respect to paragraph 3.

Copies of this letter are being sent to Mr. Angus and Mr. Macdougall.

Yours truly,

(signed) 'K.D.M.Spence'".

(page 3551 follows)



We were in touch with the Montreal officials, and we thought they were satisfied with these provisions at that time.

I wanted you to comment on that. We have received this copy (indicating), and it did not seem to indicate that the railway was prepared to "go along" even in a reasonable measure.

I do not know whether this has come to your attention or not.

A. No.

Q. Or if you knew they were taking action that way, in your organization.

A. No, I do not know anything about that.

Q. I will be glad to leave a copy with you, if you wish.

A. I think we have a copy, and Mr. Baillie can look into it.

I thought, while you have been speaking so much about diesel locomotives, you might be interested in seeing a picture of the old gentlemen who designed the first main line diesel locomotive in the world.

BY MR. MURDOCH:

Q. What nationality was he?

A. A Russian. It is very interesting.

BY THE CHAIRMAN:

Q. He designed the first one?





A. I had him in my office when I was Vice-President.

Q. Is he still alive?

A. No, he died about three months after that (indicating) was taken.

To me, it was like meeting somebody out of a history book. I had written my first thesis on "Diesel Locomotives" in 1928, and at that time there had been a few other installations. All the work had to be done in Germany, and I had a chap working with me from Istanbul, who spoke German fluently, but most of the work was done by this old gentleman.

I found out accidentally three or four years later that he was living quietly in Montreal, and had a son who was working in the Montreal Locomotive Works, and the old gentleman and I had a long chat about his early work.

In 1923, there was constructed the first main-line diesel electric locomotive, which was used on the Russian State Railway. It was built in Germany, and this old gentleman (indicating) designed it.

About six months after he died, his son died, so the family is gone.

MR. MURDOCH: Mr. Crump and Mr. Baillie; on



behalf of the Committee, I would like to express our thanks for the time you have given us this morning and for the information you have made available to us through your conversations and your remarks.

We do feel that you are conscious of the problem, and have done what you can about it.

I know we are all very happy to learn that you are going to dieselize as quickly as possible, probably within the next ten years, and by that time you will perhaps be completely dieselized, because, as our Chairman has said, our main purpose has been the elimination of black smoke, fly ash, and so forth, because, at this point, it seems to me these are the most obnoxious, and are giving the most concern to the people today.

We realize you are an extremely busy man, and I know I speak for everybody on the Committee when I say we have enjoyed our visit with you. We have had a very inspiring conversation with you, and perhaps we have both gained something from it.

THE CHAIRMAN: I think you might like to know that Mr. Murdoch is the Whip of our Progressive Conservative Party in the Ontario House, and that is why he speaks so snappily.

MR. MURDOCH: At the conclusion of these



remarks I made, I figured our reporter would stop writing, and that would be the end of that. However, as he did not, I think some official word from you, Mr. Chairman, is necessary.

THE CHAIRMAN: I can only add to what you have said, Mr. Murdoch, that we appreciate being with you this morning very much, Mr. Crump.

As I said at the beginning, we wanted to talk to the man at the head of the Canadian Pacific Railway. We have done that, and learned a great deal, and we feel very happy about this visit.

The reason I am personally interested in this, is there is no person to whom I like better to speak than my good friend, Mr. Baillie. I understand he is the Vice-President in charge of a large section of the Canadian Pacific Railway, from Winnipeg to the east coast, and I knew he understood, when I said we wanted to speak to you, and I was certain he would be here anyway.

THE WITNESS: I wanted him here, because he is more familiar with these things than I. I have gotten away from the railway to some extent. We operate many services, and I have to devote a great deal of time to other things, and my detailed knowledge of the railway is not as great as it perhaps should be.





THE CHAIRMAN: We would like to have you join us for luncheon. We will go to the Mount Royal Hotel, and have a little social visit.

---The witness retired.

---Whereupon, at 11:58 o'clock a.m., the further proceedings of this Committee adjourned until Wednesday, December 19th, 1956, at 10:00 o'clock, a.m.

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ONTARIO

P R O C E E D I N G S

of the

SELECT COMMITTEE APPOINTED BY THE ONTARIO LEGISLATURE  
TO ENQUIRE INTO CERTAIN MATTERS AND LEGISLATION  
REGARDING SMOKE CONTROL AND AIR POLLUTION IN ONTARIO.

Mr. A. H. Cowling, Chairman.

Dr. F. A. Evis, Secretary.

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VOLUME XLVII

Wednesday, December 19th, 1956,

MONTREAL, P. Que.

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R. C. Sturgeon,  
Official Reporter,  
Parliament Buildings,  
Toronto, Ont.



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INDEX OF PROCEEDINGS FOR FORTY-SEVENTH DAY

Wednesday, December 19th, 1956.

Groulx, Dr. A. . . . .	3557
	3566
	3578
	3619
Plamondon, Sarto-R. . . . .	3564
	3567
	3575
	3580
	3582
	3587
	3591
	3608
McDonald, Q.C., D.A. . . . .	3562
	3565
	3573
	3583
	3589
	3617
Belyea, H. . . . .	3562
	3580

- - - -





F O R T Y - S E V E N T H    D A Y

Montreal, P.Que.,  
Wednesday, December 19th, 1956,  
10:00 o'clock, a.m.

- - - -

The further proceedings of this Committee  
reconvened pursuant to adjournment.

Mr. A. H. Cowling, Chairman,  
Presiding.

PRESENT:

Messrs. Elliott,  
Morningstar,  
Murdoch,  
Gordon,  
Thomas (Oshawa),

Dr. F. A. Evis, Secretary.

APPEARANCES:

Dr. Ad. Groulx,	Director of Health Department, City of Montreal.
Mr. Sarto-R. Plamondon,	Smoke Control Engineer, Sanitary Inspection Division, City of Montreal.
Mr. Jean Marier,	Engineer in Charge of Division of Sanitary Inspection, City of Montreal.
Mr. D.A. McDonald, Q.C.	Member of Legal Department, City of Montreal.



Mr. Harry Belyea,

Chief Air Pollution  
Control Officer, Metro-  
politan Toronto.

- - - -

---In the temporary absence of the Chairman, Mr.  
R. E. Elliott, assumed the gavel as the Acting  
Chairman.

THE ACTING CHAIRMAN: I do not think I  
will give you the same introduction as our Chairman  
would if he were here.

We are a Select Committee of the Ontario  
Legislature set up to investigate smoke control and  
air pollution in the province of Ontario.

We have travelled widely throughout Ontario  
and the United States gathering information, and we  
have found, from talking with people we met here and  
there throughout the country that you here in Montreal  
have one of the best organizations on the North  
American continent, so we have come here to see if we  
cannot learn something from you.

DOCTOR GROULX: I do not know how much you  
can learn from us. The city of Montreal has done  
something on this problem since 1950.

THE ACTING CHAIRMAN: You have a by-law?

DOCTOR GROULX: Yes. About a year ago,



there was some responsibility transferred from the Planning Department to the Health Department. Following that, the Planning Department turned the responsibility for issuing permits for equipment for new buildings and new installations to my Department, for control and supervision.

THE ACTING CHAIRMAN: That is the Health Department?

DOCTOR GROULX: Yes.

THE ACTING CHAIRMAN: Do you examine the plans for new buildings?

DOCTOR GROULX: No, that is done by the Planning Department.

DOCTOR EVIS (Secretary): The plans for new buildings have to be approved by the Planning Department, before construction can be commenced?

DOCTOR GROULX: Yes, and for the installation of boilers, and so on.

THE ACTING CHAIRMAN: And they pay a fee?

DOCTOR GROULX: Yes.

THE ACTING CHAIRMAN: After they have received the permit --

DOCTOR GROULX: No, we have nothing to do with that. That is the Planning Department.

THE ACTING CHAIRMAN: Is the Planning Department





under the jurisdiction of the city of Montreal?

DOCTOR GROULX: Yes.

THE ACTING CHAIRMAN: It is not under provincial jurisdiction?

DOCTOR GROULX: Just as you have in Ontario, we have the Department of Civil Engineering. Mr. Fournier is a good friend of Doctor Berry's.

THE ACTING CHAIRMAN: In Ontario, this comes under the Department of Labour.

DOCTOR GROULX: Yes, I think there is something under the Department of Labour, but I am not familiar with that.

THE ACTING CHAIRMAN: They do examine plans?

DOCTOR GROULX: Yes.

THE ACTING CHAIRMAN: What the Department of Labour is interested in particularly are cafeterias, lavatories, and so forth, in Ontario.

DOCTOR GROULX: I think that comes under one of the other departments.

THE ACTING CHAIRMAN: You examine the plans in the city of Montreal in your Planning Department?

DOCTOR GROULX: Yes. We have a special code, a municipal housing code.

THE ACTING CHAIRMAN: For apartment buildings, particularly?



DOCTOR GROULX: Yes.

THE ACTING CHAIRMAN: Do you have incinerators in the apartment buildings here?

DOCTOR GROULX: Yes.

THE ACTING CHAIRMAN: Do you find they are working well?

DOCTOR GROULX: We have trouble with them. I live in a section of the city where there are apartments; we have trouble even in my own apartment.

We also have trouble with the private incinerators.

MR. THOMAS (Oshawa): This is strictly a Montreal by-law?

DOCTOR GROULX: Yes.

MR. THOMAS (Oshawa): Is there any provincial law?

DOCTOR GROULX: There is no provincial law.

THE ACTING CHAIRMAN: Mr. Marier, you are an engineer?

MR. MARIER: Yes.

MR. PLAMONDON: Hewas with the province for two years, as a hygiene engineer.

DOCTOR GROULX: Mr. Marier was also with the province before coming with us in the city.

So far as the material is concerned, there are



two general ways for its disposal.

But, before going further, I would ask Mr. Plamondon to invite you, if you have time, to have luncheon with us at one of the city restaurants.

DOCTOR EVIS (Secretary): We would be happy to have you have lunch with us.

DOCTOR GROULX: We would be proud to receive you at St.Helen Island. I have been instructed by the Mayor's office to extend that invitation.

THE ACTING CHAIRMAN: We cannot resist good food.

DOCTOR GROULX: To come back to this general idea of smoke control in the city; you see now, we have two by-laws. The previous one was divided into two parts. One is under the jurisdiction of the Planning Department, and the second one concerns the control of smoke and air pollution, and is under the jurisdiction of my department.

Mr. Plamondon will be able to tell you about that.

Mr. McDonald is one of the senior officers of the Legal Department, and specializes in legal questions concerning smoke control. He had some experience with the proceedings against the Canadian National Railway two or three years ago.





MR. BELYEA: May I ask a question about the enabling Act in the province? Can you write anything at all into the Act on the question of air pollution or nuisances?

MR. McDONALD, Q.C.: We can, with the exception of railways. In connection with the railways, of course, we have to go to the Board, and we obtained, about 1948, an Order from the Board for the abatement of smoke.

THE ACTING CHAIRMAN: Does that apply to foundries, also?

MR. McDONALD, Q.C.: No.

MR. BELYEA: We know the railway set-up is the same in Ontario as it is here, but there are some restrictions in our provincial Act which makes it a little difficult to bring a few industries, such as foundries and brickyards, under control. There are no such restrictions here?

MR. McDONALD, Q.C.: No, as far as industries, except the railways, there are no restrictions.

MR. THOMAS (Oshawa): There are no exemptions?

MR. McDONALD, Q.C.: Not that I know of.

MR. BELYEA: Our provincial Act enables municipalities to deal with smoke, and a separate one enables them to deal with nuisances, which is a little



different than smoke control, but there is nothing at all about air pollution, aside from smoke. Actually, there is no provision at all.

THE ACTING CHAIRMAN: For foul smells, such as fertilizer plants?

MR. BELYEA: No. What I am saying is that you might put a thousand pounds of chlorine into the air, and if it did not bother anyone, there is no provision in our law to cover that.

THE ACTING CHAIRMAN: Do we have that problem?

MR. BELYEA: Is your law enabling, so that the city can write everything and anything.

MR. McDONALD, Q.C.: I would not go so far as to say that. We have certain powers in our statute, which enables us to issue a by-law, which we did, with regard to smoke.

MR. BELYEA: That specifies smoke?

MR. McDONALD, Q.C.: We have some clauses in the by-law with regard to air pollution as well. But insofar as a nuisance is concerned, we have the Health Act, which gives us certain powers with regard to nuisances.

The Health Authority -- Doctor Groulx -- has the power to declare anything a nuisance, and amongst those are smoke and air pollution.



MR. BELYEA: There is no restriction on what he can declare as a nuisance?

DOCTOR GROULX: Oh, we have to prove that.

THE ACTING CHAIRMAN: Do you have any trouble with roofing or asphalt plants?

MR. PLAMONDON: In Montreal, we have one big plant which caused quite a bit of trouble some years ago. We have had only one, or maybe two complaints about that plant lately: they have made quite a bit of improvement.

Five or six years ago, they put in wash towers for their gases and restoration towers, and we have had one or two complaints about those.

THE ACTING CHAIRMAN: Would it be on days when there was fog?

MR. PLAMONDON : It may be. It was not proven that the smell was really coming from that plant, as it is now,

In the east end, when we received these complaints, at the same time we received complaints concerning other smells, so the people living around there came to the conclusion that the smell came from the nearest plant, instead of the furthest one.

Today, the roofing plant is not a nuisance; there is no regular complaint about that. We might





have the odd complaint; incidentally, they might have trouble like they had this spring.

We had a complaint this spring, and the engineer told me that for a couple of days, they had trouble with part of their equipment, and he admitted there might have been some kind of a smell spread around, but, as a regular thing, there is no trouble at all.

MR. THOMAS (Oshawa): Doctor Groulx, to get back to railroads and steamships; Mr. McDonald said they would be under Federal jurisdiction?

MR. McDONALD, Q.C.: Yes.

MR. THOMAS (Oshawa): Did you ever give any thought that you might do something under the Health Act?

MR. McDONALD, Q.C.: If it would be a nuisance, Doctor Groulx would have the authority to declare it a nuisance.

MR. MARIER: It has been so declared.

DOCTOR EVIS (Secretary): If the Doctor (Dr. Groulx) declares it a nuisance, do you have to prove it?

MR. McDONALD, Q.C.: Oh yes. Before you take any proceedings, under that declaration.

You can send them a notice, and ask them to



remove it, and the province can step in, if they see fit, and if they do not, the municipality can lay a complaint.

MR. THOMAS (Oshawa): Have you ever done that?

MR. McDONALD, Q.C.: We started it, and then stopped it, but we are now considering it again in connection with the Turcot yard.

DOCTOR EVIS (Secretary): Would it be obtained on the evidence of a number of citizens bothered by the nuisance?

MR. McDONALD, Q.C.: That would help. And then through tests which you could make, you could show that it was such that it constituted a nuisance.

The Health Act defines "nuisance" to be such as the health authority declares to be a nuisance. If we went to court, we have to support that by proof.

MR. MORNINGSTAR: That would be under the provincial law?

MR. McDONALD: The Quebec Health Act.

DOCTOR GROULX: That is why the responsibility was transferred from the Planning Department to the Health Department, because, as Mr. McDonald said, the Health Officer has the power to declare something as a nuisance under the Public Health Act in the province.



But before we can do that, we have to prepare the proof.

Mr. Plamondon has been working on this lately, trying to prepare a new project. In fact, we have before the Board of Health now a report to be approved and sent to the City Administrator, in order to obtain the necessary money to provide the required equipment to make these tests to prove the nuisances.

We have something which, so far, is very elementary.

THE ACTING CHAIRMAN: You have no laboratory working on smoke control?

MR. PLAMONDON: The Department has a laboratory, but I would not say they have the most expensive equipment to do these detailed analyses for the composition of dust or gas, or things like that. That is what we are working on now.

We have placed a certain number of containers in places which are the most annoying, such as the railroad yards, and by the collection of the fall-out from the air, we can determine the approximate amount of solid matter, and compare it with our residential district -- I am speaking of results, because it is hard to compare the figures with those of another city, if they do not have the same type of set-up --





and compare it with other districts around the city, and we can then say that in the districts where the railroads are situated, there is a fall-out of so many tons per square mile, per month, and by comparing that with the other districts, and if we find it much higher where the railroads are situated, we can say, "That is too much", and that is the proof of a nuisance.

I figure another thing we have to do is to go around the municipality in the mornings, where the people are doing their own washings, and putting their clothes out on the lines in the back yards, to see what damage has been done, and to take photographs, and perhaps some samples of the clothing.

It might be that in one spot it could be a nuisance for certain people, but not for the whole section of the community, and again it would be very difficult to try and prove the nuisance was only in one district.

THE ACTING CHAIRMAN: Is this fairly new -- these collectors you have?

MR. PLAMONDON: We have been in that for the last two months, but it is very elementary. I would not like you to get the idea that we have a very scientific set-up.



As Doctor Groulx just mentioned, we have a report asking for money, and in the meantime, we are using the less expensive things. We take glass jars, and put them on some of the roofs, and we hope to get comparative figures throughout the city to give us an idea of what is falling from the air.

Mr. Belyea will agree with me, that these things have been discussed with Doctor Allcut, of Toronto University, and it is possible the fall-out from the air is not a thing which can be compared as between city and city.

As long as we have containers which are the same in one city, we can compare the results between different districts in the same city, and we can get a fairly good idea of what is falling.

THE ACTING CHAIRMAN: Is there much oil-burning here?

MR. PLAMONDON: There is a great deal of oil and coal -burning. I would say it is about 50/50.

THE ACTING CHAIRMAN: In the private homes?

MR. PLAMONDON: Then I would say it must be about 70 percent. oil there.

THE CHAIRMAN: You are going to oil pretty fast?

MR. PLAMONDON: Yes.



THE ACTING CHAIRMAN: Is that a healthy situation in which to live?

MR. PLAMONDON: It is all right. We have had some complaints which were bad some years ago, but now we do not see that they are emitting smoke.

MR. MORNINGSTAR: Have you an Electro Metallurgical plant in Montreal?

MR. PLAMONDON: I think there is one at Beauharnois. That is 35 miles out. They produce the silicon steel.

I had some experience with that plant before I joined the city of Montreal, when I was with the Industrial Hygiene Department.

As a matter of fact, the plant in Beauharnois had fifteen furnaces for silicon steel, and they were open, in the plant. They were being unloaded by shovels.

Some of the dust and smoke was spread throughout the plant, going out through an opening in the roof on certain days, and the smoke was so bad on certain days that it was blocking the sight on the road beside the plant. There were a number of head-on collisions on the road, due to the smoke, which was cutting down the view of the drivers.

They improved that some five years ago. They





built a new plant with completely enclosed furnaces, and they spent about \$3½ million for the two furnaces for silicon steel, and they have washer towers to clean the gases, and burn the C.O. coming up, and the carbon monoxide, in a pipe to the roof.

You can see a flame coming out at all times.

Those two furnaces cleared the question for part of the plant, because they can produce a certain type of silicon steel in the plant, but only about 50 percent., and as they have to produce about 60 percent. or 70 percent., they have to rely on the open furnaces, so they still have four or five open furnaces.

That is important, because now instead of having fourteen or fifteen open furnaces, they have only three.

MR. MORNINGSTAR: They made them larger?

MR. PLAMONDON: The two furnaces can produce as much as twelve, with the same crew to handle one of the furnaces which they needed to handle the old one, so they cut down their staff by ten.

That part of the plant is perfect.

MR. MORNINGSTAR: They make manganese?

MR. PLAMONDON: Not there; only silicon.

MR. THOMAS (Oshawa): Can you get any assistance from the provincial government, scientifically,



or financially?

MR. PLAMONDON: Technically, we could, yes. I believe, technically, the Federal government could help us, because they have a nice laboratory in Ottawa for industrial hygiene and control.

The provincial government could assist, us, yes.

MR. THOMAS (Oshawa): Have you taken advantage of any of these services at all?

MR. PLAMONDON: Up to date, no.

First of all, I must explain that until last year, the Division of Air Pollution Control was not considered as a Division for research or for scientific experimentation. It was considered as a control for smoke and smoke only.

So the work which was done was mostly by inspectors who have their first and second-class stationary engineer certificates, and those fellows went around the town and observed chimneys, and when a chimney was smoking too much, they went in and instructed the engineer in charge and tried to get the people to change from one coal to another, if the coal was not the proper fuel for the type of installation they had. By doing that, the Division has obtained good results.



As a matter of fact, every morning you can look around and see a number of chimneys, and the steam is up, but there are very few chimneys smoking.

With the railroads, it is the same thing. We have had an Ordinance since 1948, and we have two inspectors who are specially trained to observe railroad smoke. In addition to that, the railroads have their own inspectors.

MR. MORNINGSTAR: You said you had to go to the Board of Transport Commissioners some years ago about getting the Canadian National Railway to clean up?

DOCTOR EVIS (Secretary): Could you give us a copy of the 1948 Order of the Board?

MR. McDONALD, Q.C.: The one which applies to Montreal?

DOCTOR EVIS (Secretary): Yes.

MR. McDONALD, Q.C.: Yes.

MR. MORNINGSTAR: They were the only ones who asked for it.

MR. McDONALD, Q.C.: We found the only Board Order was in 1908, in Toronto.

In order to obtain a smoke Order, a municipality has to have a by-law in force, and in making our application for an Order, we based ourselves on the Toronto Order, because our chances of obtaining it would be





better, and later on, if there were any changes to be made, we could apply to have that amended.

DOCTOR EVIS (Secretary): This Committee recommended an amendment to this 1908 Order. Doctor Katz was doing some revisions for it, and the copy was sent to him.

MR. PLAMONDON: We have copies of Doctor Katz' draft, too.

DOCTOR EVIS (Secretary): I think ours was quite a bit more stringent. This (indicating) is what the Committee recommended.

MR. McDONALD, Q.C.: At the same time we applied for an Order, a delegation went to Ottawa and made a presentation before the hon. Minister of Transport, and as a result of that, the hon. Minister of Transport appointed a Committee this year, under the Chairmanship of Mr. Hartell, who was the Director of Operations of the Board, composed of representatives of the railways, and of the city, and that Committee sat during two years, two or three times a year, and went into every phase of the thing, that is, the emission of smoke by the railways, and at each meeting it all came down to the fact that excessive emission of smoke was due to the human element. That was the case at every meeting.



We have not held any of these meetings since 1950 or 1951, but there was the greatest co-operation brought about through these meetings, between the city and the railways, and they were no doubt of great benefit.

DOCTOR EVIS (Secretary): Do you find the railways are behaving quite well now?

MR. McDONALD, Q.C.: I think there has been a great improvement, as far as the yards are concerned, particularly the Turcot yard, although the number of locomotives which are emitting smoke from all conditions is still deplorable, but there is considerable improvement.

Even if each locomotive conformed with the Order, the condition still is pretty bad.

DOCTOR EVIS (Secretary): In regard to the new roundhouse at St. Luc --

MR. PLAMONDON: It is not really a roundhouse, as we understand it. They have a power plant where they put up steam, and they can steam up a locomotive directly from the boiler. That helps a great deal in servicing the locomotives and preventing smoke, because right away they get 150 or 175 pounds, and they heats up the fire boxes with oil burners, and they put the coal in the fire box and light it slowly, and with



the boilers being warm, they can control the smoke very well.

DOCTOR EVIS (Secretary): The roundhouse at St. Luc is a big improvement?

MR. PLAMONDON: Yes, and the Canadian Pacific Railway is changing over to diesels, and we do not have very much smoke coming from the Canadian Pacific Railway in the city now. They only service about twenty locomotives, where they formerly serviced about seventy-five. They are for trains coming in and out of the Windsor Station.

In Turcot, they are servicing about 175 locomotives, and some years ago they were servicing only about 125, although they have increased diesels from twenty to 104. So they have brought in diesels to meet the traffic they have to meet.

THE ACTING CHAIRMAN: Did you get the assurance from either the Canadian Pacific Railway or the Canadian National Railway that they were hesitant about putting the diesels into Montreal before other sections of Quebec?

DOCTOR EVIS (Secretary): I think they are going to Montreal, instead of Toronto.

MR. McDONALD, Q.C.: Yes, they go to the eastern provinces, because they have not increased





very greatly here.

MR. PLAMONDON: The "grape-vine" information we have is that they are dieselizing some of the other parts of the country, and perhaps Montreal and Toronto will be unlucky, because I understand they are transferring the steam locomotives either to Montreal or Toronto, those which would be remaining on the road, because they have the roundhouses to service those. They want to get rid of the roundhouses everywhere else.

We had about 125 steam locomotives last year, and we are up to 150 now. I was disappointed when I heard that. It is not official, but it is "grape-vine" information. From what the inspectors say, there is an increase.

THE ACTING CHAIRMAN: There is, of course, the waterfront in Toronto; what do you think about that?

MR. PLAMONDON: With the lake there, you are liable to have more trouble than we have here, from more damp mornings.

We had a real, miniature "smog" some three months ago. It was on the first of September. We were driving down east, and we could see the "smog" over the city. It lifted about 11 o'clock that morning.



It might be well to remember that that was the day they started running the diesel buses on St.Catherine Street.

THE CHAIRMAN: Did we receive some views from Mr. Plamondon about the provincial authority, and what he thought about splitting the authority between the municipality and the province?

THE ACTING CHAIRMAN: The city of Montreal has two by-laws here.

DOCTOR EVIS (Secretary): We found out the provincial legislation does not have any exemptions, as ours does.

THE ACTING CHAIRMAN: The only ones which are exempted are the railroads.

THE CHAIRMAN: Is there a provincial law affecting pollution and smoke?

MR. McDONALD, Q.C.: Not as such, because the Health Act, which deals with nuisances, provides that Doctor Groulx has the right to declare any condition a nuisance.

THE CHAIRMAN: That is all the authority you need to handle that properly?

DOCTOR GROULX: As I said a moment ago, two or three years ago these responsibilities were under the Planning Department. When the city wants



to take any action against the railroads, particularly the Canadian National Railway, they have to refer the whole question to the Department of Health to declare the smoke a nuisance, so far as the Canadian National Railway is concerned, and we have legal procedure, through Mr. McDonald.

The Health Department had to do that, because the Planning Department did not have the authority.

THE CHAIRMAN: We have been talking about the possibility of setting up a Board or Authority at the provincial level. There are several departments which have to deal with air pollution, such as the Planning Department, the Labour Department, and so on. It seems to us that the Health Department would be the best place for it.

DOCTOR GROULX: I think so, because I think it would be the same in your own province.

It probably could, because, as Quebec has the power to appoint a health officer, any matter concerning provincial health would apply to him, as far as the province is concerned, and to the local health officer, as far as the municipalities are concerned.

THE CHAIRMAN: It would have to come to Health anyway, for final ratification?





DOCTOR GROULX: That is true.

MR. BELYEA: We have that in our Health Act. The Department of Health can declare a nuisance, because they do not take any action in that case, because, although they are free to declare a thing a nuisance, they are afraid they cannot prove it.

DOCTOR GROULX: Our law gives the medical officer all the power.

MR. MORNINGSTAR: Do you think it is operating all right under a city ordinance, or the provincial law?

DOCTOR GROULX: We have both. Perhaps the municipality may have some special problem, as far as the city may be concerned, but I think it is a good thing to have a provincial body.

MR. MORNINGSTAR: We have heard them say, "If you enforce the by-law, we will move out of the municipality, and move to the province of Ontario, because they will not bother us".

MR. PLAMONDON: I believe the provincial Act would be very good to help out the smaller municipalities and it would not interfere with the larger cities.

You have a Health Department in Ontario just as we have in Quebec, and you have these small communities, which have, perhaps, no department of health, because they cannot afford to have their own



Health Department, whereas the larger cities have a health department, like we have in Montreal, which is doing the same work as the provincial set-up, but which deals only with Montreal, because it requires such an organization, as we have such a large population here.

THE CHAIRMAN: Do you have that problem in Montreal?

MR. MARIER: Yes, I was coming to that. We need the control on a provincial level. We have~~the~~ the problem of the refineries outside of Montreal, but the nuisance is created in Montreal. We receive the complaints, but we cannot act unless we act by the province.

MR. MURDOCH: You cannot deal with them at the present time?

MR. MARIER: No.

MR. THOMAS (Oshawa): What do you do to encourage industry? Have you any body set up to assist industry?

MR. MARIER: Not yet.

MR. THOMAS (Oshawa): Do you contemplate doing such a thing?

MR. MARIER: Not yet.

MR. THOMAS (Oshawa): There again it is the



degree of enforcement, and the only way it can be overcome is by co-operation, and I think a committee composed of industry, and others interested in the problem, would be a very good thing, and I was wondering if you had considered that.

MR. MARIER: Not as yet.

MR. PLAMONDON: Some of the worst offenders, like the quarries, are outside of Montreal, and under provincial authority.

We can go to see these people, and we have, and we were very well received, and they gave us all the information for which we asked, but we cannot enforce anything against them, because they are outside of our jurisdiction.

Inside of the limits of the city of Montreal itself, we do not have many industries like refineries which are really offending. It is those which are just outside the city limits.

MR. MORNINGSTAR: What about your municipalities?

MR. PLAMONDON: They have nothing.

DOCTOR GROULX: They have at times consulted with our health officers, but the problem is that they are outside the limits of the municipality of Montreal.

DOCTOR EVIS (Secretary): Before we leave





the railways, may I ask if you have actually had any of the railways fined, or their personnel, under this Order 70714?

MR. McDONALD, Q.C.: Yes, we have, since the Order was issued, taken about six complaints, or maybe more. I think there were five heard, and we had two convictions, and one was thrown out on a technicality, and in regard to the other two, we made prima facie cases, but doubts were created.

In one of the last cases, it went to a conclusion, but they created a doubt, and on that case depended about six or seven others, so we did not proceed with the others, but we have taken a complaint against the Canadian National Railway for the excessive emission of smoke from one of its locomotives in the Turcot yard, and we made our proof on that, and there was a motion for a non-suit, and the court held that we had made out a prima facie case, and he will dispose of it on the eighth of January.

Under the Order as it stands now, we had two difficulties from a legal point of view, and from the point of view of proof. One was in regard to proving the Ringelmann Chart. In the very first action we had, we produced the Ringelmann Chart through a witness, and the railway immediately objected, as we expected



they would, and they said it was not proper proof in that it was an official document emanating from a foreign country.

At that point, the judge considered that it was a document, although we presented a strong argument to the effect that it was not a document, but simply an instrument for measuring smoke.

There was an adjournment then, and we came back the next day, and we tried it in another way. We had the inspector produce the chart as the chart which was used, and it was accepted, and then we brought in Mr. Coombs, as an expert, and he declared what the chart was, and he gave all the dimensions on the chart, and said exactly what it was.

Then we asked him what the Ringelmann Chart is, and he gave the dimensions on the Ringelmann Chart, and we asked him how the figures compared with the Ringelmann Chart, and he said the chart filed by our inspector was a Ringelmann Chart, and it was then accepted as proof.

But we had to go around through the back door, and it created quite a bit of difficulty.

The other difficulty we had was with regard to the operation of the locomotive, because Section 3 says that the offence is that the locomotive will be



operated in such a manner as not to create excessive smoke, so there we had to go -- they would not admit that the locomotive was operating -- and we had to make a search at the Registry Office to show that it was, and to prove it, we brought in tax rolls, and tax bills.

With regard to the Canadian Pacific Railway; I think there was some confusion about different companies. We said the property belonged to the Company, and the Canadian Pacific Railway took it over, and we had to make a search to connect the Company with the Canadian Pacific Railway Company, to show that they had purchased the property.

We had the same thing in this last case in regard to property which is operated by the Grand Trunk Railway, so we had to get a copy of the official Gazette, showing the Canadian National Railway took over the old Grank Trunk Railway.

I think all that difficulty is unnecessary, and that perhaps some amendment could be made which would state, as regards the Ringelmann Chart, that it is a measure, and not a document.

I think it might be suggested the railways would be obliged to file a plan of all their properties, and have them listed, which would show property operated





by the railways, and in that way we would not have to make searches every time, and bring in the tax rolls, and the tax bills, and that sort of thing.

THE CHAIRMAN: You think it would save a great deal of time if we had the railways operating in Ontario file returns of all their equipment?

MR. McDONALD; Q.C.: Yes.

THE CHAIRMAN: That sounds like a time saver.

MR. McDONALD, Q.C.: Yes. We must have spent a day in each case, just on the operations.

MR. BELYEA: The railways have fought this to the last ditch.

MR. McDONALD, Q.C.: Yes, particularly the Canadian Pacific Railway. We do not have much trouble with the Canadian National Railway, but the Canadian Pacific Railway has outside counsel who handles their criminal work, and they gave us a real battle. They brought up all kinds of things which would create a doubt, and they succeeded.

DOCTOR EVIS (Secretary): The fact is that the Board Order refers to the Ringelmann Chart, as prepared by the United States Bureau of Mines.

MR. McDONALD, Q.C.: If it was a document, we would have to prove it is an official document emanating from a foreign country. But if it is held



it is only a measure, we will not have to do that.

DOCTOR EVIS (Secretary): It would be better to eliminate the words "emanating from a foreign country".

MR. McDONALD, Q.C.: Yes. If you say "a measure known as the Ringelmann Chart", and then stop there, it would be better.

MR. MURDOCH: In Ontario, we could probably work something out, along the line of the Ringelmann Chart, but we do not have to keep the Ringelmann Chart.

I was thinking about calling it the "C.S.C." -- which would be the "Cowling Smoke Chart".

MR. THOMAS (Oshawa): You could overcome that if you left out the reference to the "United States Bureau of Mines".

DOCTOR EVIS (Secretary): Do you use the big, original chart, or a miniature chart?

MR. FLAMONDON: We use the large one, and also a good one published some years ago by Pilbury, with an opening in the centre, showing the density of the smoke around the area.

In the last case, the inspector used both the Ringelmann Chart, and in the other used the small chart. I believe the judge has accepted both of them,



as they compare.

It was recommended in the report of another case, where the judge mentioned there should be a chart which would be easier for the inspectors to handle, and in saying that, he had in mind the small Tilbury chart.

We use the ones published in "Power Magazine". It was the intention at one time to try and have these accepted as a means of measuring smoke. We know that in New York they have them officially, and have had for at least two years.

I was at Doctor Greenberg's office two years ago, and at that time it was accepted as a comparative chart, because of the large percentage of real "headaches" in connection with its use, particularly in regard to some types of ground, where the topography does not lend itself too well.

In the last case, the chart had to be placed on top of an embankment in the Turcot yard. That came up in court, too, that is, the way they were looking down with a background which was dark on account of the roundhouse, and the other buildings in the yard, and when they came into court, and said the background was dark, any court would ask, "How can you give the density of smoke when the background





is dark"? We said we were doing it in two ways.

DOCTOR EVIS (Secretary): The judge was more or less sympathetic to your side?

MR. McDONALD, Q.C.: He seemed to be. We followed the observations made in the last judgment, and when he saw that, naturally he was sympathetic.

In the Canadian Pacific Railway case, with regard to the charts, he stated we had proceeded on the Ringelmann Chart only, but the Canadian Pacific Railway brought out the Pilbury chart, and he stated in his judgment -- although it was not particularly relevant, but might be helpful in future cases -- that the Ringelmann Chart was in theory only, while the Pilbury chart was the practical chart.

So Mr. Paamondon, in preparing the case, used both charts, and the judge seemed very pleased with that, when that was done in this last case.

MR. MORNINGSTAR: What would be the fine?

MR. McDONALD, Q.C.: It is \$25.00, under the Order.

MR. GORDON: What is the difference between the two charts?

MR. McDONALD, Q.C.: The Ringelmann Chart is a large board on which the percentages of density are marked. The Pilbury chart is based on the same



percentages of density, but they are in a circle, and in the middle, there is a hole, and the observer holds it at arm's length and looks through the hole, and compares the density with the percentages which are around the hole.

I think it is really more practical than the Ringelmann, but I believe the idea is to use both together.

THE ACTING CHAIRMAN: You have quite an apartment city here.

DOCTOR GROULX: We have quite a number of apartments. How many are there, Mr. Marier?

MR. MARIER: Many thousands.

THE ACTING CHAIRMAN: Are there new ones going up?

MR. MARIER: All the time.

THE ACTING CHAIRMAN: And it is the incinerators which are causing the problem?

DOCTOR GROULX: Yes.

THE ACTING CHAIRMAN: Have you anything to offer which you think would be helpful?

MR. MARIER: We have nothing much to offer. We have to have a new by-law for each project, but it is not in force as yet.

DOCTOR EVIS (Secretary): Are you going to



demand two-chamber incinerators?

MR. MARIER: It has been submitted to the Planning Department, but it has not been submitted to us as yet.

THE ACTING CHAIRMAN: You are working on a new by-law?

MR. MARIER: Yes. At first, we will have one chamber.

THE ACTING CHAIRMAN: Your city is inclined to be hilly, so the buildings down below are smoked out?

MR. PLAMONDON: People living in the high buildings will get the smoke from the incinerators located in the low buildings. I think the big problem is fly-ash.

THE ACTING CHAIRMAN: More than the smell?

MR. PLAMONDON: I think the smell is only psychological. If you could stop the fly-ash 100 percent., we would not hear anything about smells.

We do not have incinerators like they have in New York, where they have 13 or 14-storey buildings, containing hundreds of families, with only one incinerator, and where the smell is terrific.

MR. BELYEA: You have the flue-fed incinerators?





MR. PLAMONDON: Yes, but, except in a few cases, these areas do not have more than 20 families in the same building, and they are burning for an hour or two at night.

We asked that it be done between six o'clock and seven o'clock in the morning, as that is when we receive the least number of complaints from the people.

MR. BELYEA: You are writing a by-law --

MR. PLAMONDON: The janitor should burn the garbage between six o'clock and seven o'clock in the morning, and rake the fire out, so there will not be paper, for instance, burning slowly, so that any new garbage will start again.

MR. BELYEA: The most you think is about twenty families?

MR. PLAMONDON: We have only a few with more than that.

MR. BELYEA: We have many which have 120 families, and we are considering prohibiting the flue-fed incinerators.

MR. PLAMONDON: Or one with three chambers, with a by-pass, so the smoke will go through the by-pass.

MR. BELYEA: Your third chamber is a settling chamber?

MR. PLAMONDON: Yes. That is what we have



in mind to put in operation, but it does not apply to existing equipment. Those which are already installed, if they are really a nuisance, we can take action against them, but it is a difficult thing to prove.

MR. BELYEA: Do you think you will have to ask for scrubbers?

MR. PLAMONDON: Yes, or a combustion chamber, or a settling chamber on the roof. It is very hard to make the proof.

I have in mind a case which was one of our first cases. That involved one of our inspectors being there for I do not know how many days, and one afternoon he went to see the lady to see if she was satisfied, and she said the incinerator burned all afternoon. That was completely false, because my inspector had been there that afternoon, and it had not burned even a piece of paper.

You get these neurotics, and they are the worst ones with whom to deal. They will keep on complaining. This lady practically threw my inspector out. She told him he was a fool and a liar.

MR. BELYEA: What about the municipal garbage disposal?

MR. PLAMONDON: There are four municipal



incinerators now.

MR. BELYEA: Have you collectors on those now?

MR. PLAMONDON: Yes. As a matter of fact, they are not really collectors. The gas passes through heat exchangers, and they are really boilers, and they have oil burners to keep up the steam, because I think some of them are being used to heat around the incinerators, so they have the hot steam necessary.

DOCTOR EVIS (Secretary): What is the capacity of the largest?

MR. PLAMONDON: I can get that information from the Public Works Department, if you really care to have it.

MR. BELYEA: What type of collectors have you?

MR. PLAMONDON: They are screen and settling chambers.

MR. BELYEA: In other words, separators to throw out the large particles?

MR. PLAMONDON: Yes. We have one running for about a month and a half. Naturally, there were many controls to adjust, because these automatic controls keep the temperature at a certain point, and naturally they did not have the amount of garbage they





needed, and the temperature was too low, and there might have been a smell for a day or two, because of the poor air velocity in the chamber.

MR. BELYEA: Has your city considered compacting as an alternative?

MR. PLAMONDON: There is an organization in Ville LaSalle which does that. They get the garbage and process fertilizer from it. We fill old quarries with the ashes from the incinerators.

THE ACTING CHAIRMAN: But the garbage in the city is burned?

MR. PLAMONDON: No. A majority of it is, but we still have open dumps in Pointe Ste.Charles, along the river, but they will be closed up when the new incinerators are brought in.

MR. THOMAS (Oshawa): How many persons do you employ in the smoke-control department, what is your budget for the year, and do you obtain any revenue of any kind from enforcing the regulations?

MR. PLAMONDON: The Air Pollution Control, not including the permit division, which has four, three inspectors and an engineer in charge -- in our group, we have four inspectors.

When the groups were together, we had seven inspectors, but we had to split the work up, and we



have four inspectors, and myself.

In regard to the revenue; the city secures the revenue, which would be from fees the people are paying for new installations, and it runs, perhaps, about \$3,000. or \$4,000. a year.

The budget right now is around \$30,000, for salaries and expenses -- something like that.

DOCTOR GROULX: The budget for the whole division is about \$250,000.

MR. MARIER: What was your budget with the Planning Department?

MR. PLAMONDON: \$56,000, so we could divide it in two. But that is not sufficient, because we have a report now asking to increase the amount.

With the change in the jurisdiction in control, it was necessary to divide the personnel, and naturally we divided the control.

MR. MURDOCH: Do you have much difficulty with steamships in the harbour?

MR. PLAMONDON: Sure we have.

MR. MURDOCH: Have you any way of controlling smoke?

MR. PLAMONDON: No, because it comes under the Harbour Act, but we have submitted to the hon. Minister of Transport a draft of an ordinance for the



control of smoke from ships. I have a copy of it here.

MR. MURDOCH: Would it be your opinion that when a steamship is in the harbour, it should come under the local smoke jurisdiction?

I do not think you should suffer from steamships beyond what is allowed to industry, because if you do, industry will say, "What is the good of our cleaning up; you still have the steamships and do nothing about them."

Do you think that should be brought under control by some regulation of the corporation?

MR. PLAMONDON: The municipality should have control of everything, including steamships, everything in the municipality; but since the public transport is under the control of the Federal government, we have to deal with it in a special way, if we can secure ordinances which are similar, but we would have to have municipal authority to enforce those ordinances, and that would come to approximately the same end, I believe.

As long as the ordinances are in conformity with what we have, it would amount, I should think, to the same thing.

A ship in the harbour should have no more right





to produce smoke than any building.

I know that the Isle de France, and other ships, have paid fines for issuing too much smoke.

THE CHAIRMAN: You have a Harbour Board here, much the same as the Toronto Harbour Commission, the Hamilton Harbour Commission, and so on?

MR. PLAMONDON: We have very good co-operation from industry. We are told that most of the ships will be dieselized within three years, that is, that most of the steamships which gave out too much smoke will have to change to oil or a different kind of coal.

We have a good example right behind this building. We had a cold storage plant there putting out smoke all the time, and they were burning coke for two years, and we did not see any smoke coming out.

There is reference in the Harbour Act concerning boats making too much smoke, and emitting carbon, and they are liable to fines up to \$100.00, but we have to prove the boat is putting out too much smoke.

For instance, a boat can go through the Lachine Canal, and we will see the boat making too much smoke, and we send a request to Ottawa, but by the time they get somebody up here, the boat may be overseas.



A good set-up would be to have an inspector who would work in collaboration with the cities involved, to make observations all the time along the waterway, and when a ship emitted too much smoke, to use the ship-to-shore telephone and call the Captain, and say, "What is going on in the boiler room?".

THE CHAIRMAN: One of the ways of treating that situation, which I would think would be satisfactory, would be if you see a ship heading out to sea, for instance, heading for Sweden, and is making too much smoke, if the Line has an office in Montreal, there is something you can do. You can pass an ordinance which affects the emission of smoke by steamships either tied up in the harbour, or a reasonable distance from the harbour, and you can take it up with the foreign agency in your city.

MR. PLAMONDON: Yes, if we have the exact time passed through the harbour, as noticed by three or four inspectors along the shore.

THE CHAIRMAN: Mr. Murdoch is particularly interested, because he lives along the Detroit River, close to Windsor, and you may have noticed where Mr. Boyle, at Windsor, secured a conviction against a ship, and made it "stick".

THE ACTING CHAIRMAN: Have you had occasion



here to fine anybody?

MR. PLAMONDON: No.

MR. MURDOCH: That is the only case where there has been a conviction. I thought it might be appealed by the Canada Steamship Lines, because it certainly set a precedent, being the first time a fine was imposed upon a company.

It was quite nominal, but that is beside the point; the next time it will be much worse, and it might be very embarrassing.

That happened in Windsor about three months ago.

MR. McDONALD, Q.C.: Is that a Windsor by-law?

MR. MURDOCH: Yes. If it is tied up in the harbour, it comes under the city by-law. Of course, down the river, it does not matter so much.

MR. McDONALD, Q.C.: Did not the question of jurisdiction come up?

MR. PLAMONDON: The point is that the harbour of the city of Montreal is not on city property. Even the police are the Harbour police. They can call upon our police under certain circumstances to go in, but, ordinarily, our police are not allowed on those ships.

THE CHAIRMAN: Then it is entirely different





from any other harbour about which we have spoken.

MR. PLAMONDON: Is yours owned by the city of Toronto?

THE CHAIRMAN: It is the Harbour Commission, representative people from the city and the Federal government. It is an autonomous body, but it operates within the laws of the municipality.

DOCTOR GROULX: The city is not represented here.

MR. MURDOCH: Who makes the appointments here?

DOCTOR GROULX: Ottawa.

THE ACTING CHAIRMAN: In the city of Hamilton, from where I come --

MR. GORDON: In Toronto, it is on reclaimed land, so the city owns this land.

THE ACTING CHAIRMAN: In the city of Hamilton, it is a Board appointed, consisting of two by the Federal government, one by the City Council, and there is no filled land, and there is the very best co-operation between the Board and the city, and they operate within their own rights.

THE CHAIRMAN: In Toronto, the Federal government appoints one, the Council appoints two, and the Board of Trade appoints one. They operate independently. They are not within the provincial



ambit at all; there is no provincial representation.

MR. MORNINGSTAR: It is non-political.

THE CHAIRMAN: No.

THE ACTING CHAIRMAN: It is very much political in Hamilton, but it has operated very well.

THE CHAIRMAN: As non-political as any appointed Board can be.

THE ACTING CHAIRMAN: You have some steep grades in Montreal: do you have any trouble with the fumes from trucks and buses affecting the drivers of passenger cars following them up the hills?

MR. PLAMONDON: We had complaints when the line started on St.Catherines Street, but that was on a very foggy morning. The people travelling on the buses were coming from the western part of the city, and they are more conscious of air pollution than <sup>in</sup> other parts.

We have had buses running on St.Hubert Street for I do not know how many years, and we have never had any complaints about fumes.

There will be a problem about it, because, as they increase the use of buses, there will be aldehydes emanating from the diesel motors and perhaps some smelly gas --

THE ACTING CHAIRMAN: Up to now, it is not a



nuisance?

MR. PLAMONDON: I cannot say it is. You can walk the streets, and not be bothered with it, as they are in other cities.

MR. MURDOCH: Your biggest trouble comes from this dirty black smoke and fly-ash rather than vapours which cannot be seen sometimes?

MR. PLAMONDON: In the city itself, yes. The plants which are considered bad nuisances are outside our jurisdiction. We get it just the same, but we can do nothing about it.

THE CHAIRMAN: Does the province take any action?

MR. PLAMONDON: Not when we started, but we have had trouble about the smell from the refineries. It was the first summer where it was really detected by the people, and where we really received complaints about it.

A refinery started up last year, and all of the sins of the people were passed onto it. They are building a new one, and all the companies got together on this project.

There are five companies, the Imperial Oil, the British American, the Shell Oil, the Sunoco and one other, which sell their gas to some other company,





which will treat it, to get pure sulphur. It will take a year or a year and a half before this new plant is built; it is a matter of spending \$4 million or \$5 million.

MR. MORNINGSTAR: They are going to collect the by-products?

MR. PLAMONDON: Yes. Sulphur is worth quite a bit of money. I think they use sulphur for many things.

The smelly gas is that which has the sulphur compounds, and they are the worst offenders. They are taking the sulphur from the gas, and that produces a more smelly gas, when taking the sulphur out.

It is a matter of waiting for the proper time, but it shows something is being done.

THE ACTING CHAIRMAN: Which refineries are working there?

MR. PLAMONDON: They rely so much on public relations and good-will for their business, that they are wise enough to be one step ahead of everybody.

In the last few years, I believe the big companies have learned it is best, in the long run --

THE CHAIRMAN: Some companies have been pressured into air-pollution, by the International Joint Commission, because it was found there was a



great deal of pollution in Detroit, and it was creating really a dangerous situation, and upon investigation it was found it was coming from eighty miles away, in Sarnia, and there was a rather dangerous emission.

You can secure dangerous emissions from the oil plants. They could be very dangerous.

We have been in Sarnia, and we found that the companies were doing a very good job in eliminating this nuisance.

MR. PLAMONDON: They do not like to see their names appear as being condemned and paying a fine of, say, \$25.00. That is why they "fight like coons" when we take them to court. They want to win the case.

MR. MORNINGSTAR: It is not the \$25.00 which worries them.

THE CHAIRMAN: No, it is the effect on public relations.

THE ACTING CHAIRMAN: Do you find any co-operation between industry and yourselves, all the way through -- say, about 99 percent.?

MR. PLAMONDON: I would say so. However, make it 90 percent., not 99 percent.

I had one plant here, whose head office was



not in Montreal, and they had trouble getting money to improve their set-up, and they asked us to send them a letter or official document, that we would bring them into court, so they could secure some support from their head office.

Very shortly thereafter they received an answer and they had the money, and did the work. Management itself asked for it.

With the set-up we have, we have been able to indicate to these people very well that smoke coming out of the chimneys represents dollars and cents lost.

We do not tell them it is dirty black smoke, and that they are throwing this pollution and dust into the air. If you tell them they are losing money, you can be sure they will do something about it.

MR. MORNINGSTAR: I think the hon. member for Brantford (Mr. Gordon) has had similar trouble.

MR. PLAMONDON: I just handed you a paper. I did not say what it was. It is a draft of an ordinance covering smoke control regarding ships either coming through the harbour, or at the wharves, and operating in the vicinity of Montreal.

A good part of that draft has been based on the Milwaukee ordinance regarding air-pollution control.





You will find we considered the tugs, which are in a class by themselves, as ships, also. We consider as a ship those which are tied to a wharf, and producing steam for derricks, for unloading the ships. We considered ships standing idle, and ships which might have come into collision with other ships and came into port for repairs, and so forth. Milwaukee did the same thing.

We have ships docked, docked and unloading, cleaning out new fires, and tugboats when towing, or when docked, and so on.

Naturally, you have to put yourselves in the position of making by-laws in such a way that they will be applicable.

It is like a steam locomotive; we make provision in the ordinance for when it is going up a grade, it can produce so much smoke for so many minutes, and different when on level ground, or when standing still.

I do not think the limitations in our ordinance are good. I believe ten minutes is too long. In my draft, I put it down as one and one-half minutes, or one and one-quarter minutes, to give a fellow the opportunity of building up his fire, and putting his steam jets or air jets on.



THE CHAIRMAN: You think six minutes is too much?

MR. PLAMONDON: I believe they can light up a locomotive, and produce smoke for less than ten minutes.

I do not remember what my draft provided --

MR. McDONALD, Q.C.: I think it is one and one-half minutes every ten minutes.

DOCTOR EVIS (Secretary): Then they could produce smoke for three minutes in a twenty-minute period.

MR. McDONALD, Q.C.: Yes, but not all together.

MR. MARIER: Mr. Chairman, ordinances and municipal by-laws apply to municipalities. What about the problem created by ships outside the limit? We will have that problem with the Seaway right at our door, in Westmount, which is beyond our municipality.

MR. PLAMONDON: In the by-law prepared by Doctor Katz, I understand it was available to every city where there is enough smoke to warrant smoke control.

That by-law, accepted by the Board of Commissioners, must have an officer whose duty it is to prevent too much smoke, but are we thinking



about the twenty municipalities which are going to ask for authority under the ordinance? Naturally, each municipality would have to have its own officers, to see about the application of that ordinance.

The St. Lawrence River is not under the jurisdiction of the municipalities; I would say it is a Federal highway.

If the ordinance is well made for the control of smoke in places along the river, we could co-operate with the inspectors who will be placed along the river by the National Harbour Board, and the inspectors of the municipalities involved, and I do not see there will be any trouble. They would be able to work hand in hand, such as the co-operation between Detroit and Windsor, which I understand is very good.

MR. MURDOCH: At the present time it is on a voluntary basis.

MR. PLAMONDON: I have the last report by Doctor Katz, and I see most of the chaps have been doing a good job. It has been a voluntary affair only; nobody was forced into it.

MR. MURDOCH: Do you have any record of many complaints which you have received? In other words, for instance, one hundred people calling up





the city authorities about the steamships offending?

MR. PLAMONDON: There were some complaints some years ago, but people finally realized that until we had an ordinance to control the smoke, there was no use complaining about it.

MR. MURDOCH: In other words, they accepted it pretty well?

MR. PLAMONDON: Yes. They just felt they were forced to accept it.

MR. MARIER: It is to be said that complaints have been made against the railroads, but we have found many times that the smoke about which they were complaining has come from shops.

MR. MURDOCH: In municipalities like Toronto or Montreal, it is my opinion that when you have a complaint about smoke from steamships or railroads, or plants, a record should be made of that, because at some future time you will be asked by some of the citizens --

MR. PLAMONDON: We have those records for many years back.

MR. MURDOCH: We realize that in the United States, they have a method of getting this information to the public, They try to make their people conscious of the fact that they do not have to put up



with dirty, smokey air.

Here we accept it, and we think that smoking chimneys are almost necessary to our economy, but they are not, as we have found out.

I think there is a great lack of public education in the matter.

MR. PLAMONDON: Certainly. I made experiments along that line a year ago last summer.

We had a Press Conference about the incinerators, and this year we decided to have the janitors burn at certain hours of the morning, and we put down a rule for the tenants, that they should not throw certain types of garbage, like metal pails and tin cans --

MR. MURDOCH: And no dead bodies.

MR. PLAMONDON: We had quite a spread on that, and the next week you should have heard the complaints I received in my office, but it helped us, because we put all the inspectors on that job for a week or two, and we went around some of the districts from which most of the complaints were coming.

In one district, we had some ladies calling us about the incinerator next door, but this summer we have not heard about it.

That was one place where there was some improvement.



In regard to the incinerator question; we had one complaint about a fellow lighting up the incinerator at ten o'clock, and this lady said that she had just done her washing, and it had dirtied all her clothing.

Last summer, we were sitting down on the porch, and on the lawn, and there was an incinerator burning, and the ash fell all over my wife's white dress.

In some apartment buildings, the women are working, and with some of the men, they do their washings at night, and put them on the roof, and they are all dirty in the morning.

If we burn it from six o'clock to seven o'clock in the morning, we eliminate a great deal of that.

I believe the temperature is better in the morning, and perhaps we get less gas and less emissions of fly-ash, because there is not the strong draft through the chimneys.

I do not mean to say that is the solution, but we have gone quite a ways in eliminating complaints, and are keeping the people happy.

THE ACTING CHAIRMAN: You feel it will be a help to the situation?





MR. PLAMONDON: We should have two or three combustion chambers installed in apartments, because the oil burners give the necessary temperature to burn the gases.

MR. MURDOCH: We feel when a housewife puts out a dress after washing, and it becomes all black, that is a very serious situation.

MR. PLAMONDON: Sure it is.

THE ACTING CHAIRMAN: It makes them mad.

MR. PLAMONDON: I would not like to do it myself.

MR. MURDOCH: I suggested to one company that if the people in the neighbourhood would gather up the dirt, and use their Hoovers, and join together in accumulating, say, one hundred pounds of fly-ash, and knowing it came from a certain railroad, just to take the bag and dump it into the office of one of the executives, and say, "Here, this is yours; did you miss it? Do you want it back?".

You know, you will be fined if you throw trash onto the highways.

MR. PLAMONDON: We had a Councillor come to Council at the last public hearing in the Council room, and he had some shirts and sheets and things like that, which were dirtied by the railroads. That



was his way of exhibiting the problem in his district.

MR. THOMAS (Oshawa): What happened to him at the next election?

MR. PLAMONDON: He is still here. He is still fighting it, and he is the man who did a good job on air pollution control.

DOCTOR EVIS (Secretary): What is the proposed status of this proposed Article for the regulation of smoke from steamships? Have you recommended it be adopted?

MR. PLAMONDON: No. A copy was sent to Hon. Mr. Marler, and here is the reply he has submitted, that he forwarded it to some officials in his department for a report. We have not heard further. That was sent about the middle of September. It is under consideration there. I do not know what sort of a reaction it produced, but it certainly put Hon. Mr. Marler wise to the fact that it existed, because we mentioned that actually the ships were nuisances, and we expected it to become worse with the opening of the Seaway, so it would be a good thing to take some steps about it.

In the same letter, we mentioned that, although the Act provides for a fine, the way it is set up in the Act, it must be proven, and somebody has



to come from the department to check, but by the time they arrive, the boats had gone by, and we recommended that our men supervise the boats going through the city, and if there was too much smoke, we could take action on the spot.

MR. MURDOCH: The steamships create quite a problem all around Detroit and Windsor, but I think the largest offender is a Canadian company, the Canada Steamship Lines. My own observation leads me to believe that.

They are trying to do a job in Detroit, and are cleaning the air, and when they are after an offender, and they have somebody in the office taking up the point, there may be a Canada Steamship Lines boat outside throwing out more smoke than two or three factories.

You cannot allow one offender to go scot-free and bring others into line. It is causing quite an international situation, of which the International Joint Commission is fully aware, and I think our Committee will receive full support from the Air Pollution Board of the International Joint Commission, because we have them really warmed up.

MR. FLAMONDON: They are bad offenders here. As are the river boats which go down to Tadoussac.





THE ACTING CHAIRMAN: Mr. Chairman, you have been in conference; have you the plans for the rest of the day?

DOCTOR EVIS (Secretary): The Committee is invited to luncheon. But before we go, I would like to ask a question of Mr. McDonald, based on civil rights, permitting the municipalities to pass by-laws against steamships.

What do you think of the possibility of it being ultra vires, and so on, if we could tie it up to nuisances, or from a health standpoint?

MR. McDONALD, Q.C.: If you put it on a provincial basis, I think as far as Montreal is concerned, there would be a conflict of jurisdiction, because you will understand most of the ships here are in harbour, and that is Federal property, so, for that reason, it is under Federal jurisdiction. It is like a railway. It would have to be done by an Order of the Transport Board.

DOCTOR EVIS (Secretary): The Committee has been thinking the municipality would have jurisdiction, if the air pollution blows off Federal property unto city property, and causes a nuisance there.

If we could tie it up to some provincial part of the British-North America Act --



MR. McDONALD, Q.C.: Yes, in that way it could be done, just as the Health Act covers nuisances, and anything which creates nuisances can be enforced under the provincial Act.

DOCTOR EVIS (Secretary): We thought we might get around it that way, because Ottawa seems to be so slow in these things.

MR. McDONALD, Q.C.: In that way, I think it could be done. But, as a matter of fact, the ships themselves are under Federal jurisdiction.

MR. BELYEA: Our ships come on to municipal property, and we think we should have jurisdiction over them.

In regard to the question of action of some kind; one person can sue another with regard to a public nuisance.

Thinking about the refineries outside of your municipal bounds, they can go on forever, if no action can be taken against them.

MR. McDONALD, Q.C.: An individual could take civil action for damages, and if municipal property is affected, the municipality could take action for damages, but we cannot enforce a <sup>non-existent</sup> by-law, and if there is no by-law we cannot take any action whatsoever. Insofar as damages are concerned, an individual or a



municipality can take civil action.

MR. MURDOCH: You must prove damages to the extent of so much.

MR. BELYEA: You have to prove it is a public nuisance.

MR. McDONALD, Q.C.: The responsibility for damage is based on fault. I think they could take action.

A nuisance is always a criminal matter. I think there is an Article in the Criminal Code which covers that.

MR. BELYEA: A public nuisance is an illegal act, and in our province it is the duty of the hon. Attorney-General of the province to abate an illegal act.

THE CHAIRMAN: The Committee would like to know about the Press here. We have a great deal of good Press people working for many of the papers in local communities, including those represented by the members of the Committee here, and they have taken quite an interest in smoke abatement, both editorially and otherwise.

Have you had support in Montreal from the Press?

DOCTOR GROULX: In general, we have good support from the Press, especially on this particular



problem.

THE CHAIRMAN: They are "on the ball" to support your work?

DOCTOR GROULX: Yes, and they make suggestions and so on.

We have a Press release every week, and we have talks on "smoke control".

We receive the best co-operation from the Press, perhaps the best in the country.

One day one of my good friends in Toronto made the remark that he was not surprised, but very impressed, with the co-operation we did receive in Montreal, and all the papers have written on the situation.

THE CHAIRMAN: That seems to have wound up all the questions.

First of all, I would like to thank you, Mr. Elliott, for "taking over" and doing such an excellent job on my behalf, notwithstanding our good friend, George Gordon.

Doctor Groulx, we appreciate your "pour-parler" with us, and we also want to thank Mr. Plamondon, your official Air Pollution Control Officer, and the other officials here.

I like the idea of going home and being able





to say we have visited the largest Canadian city, and found out how it is operating, and I know that many of your suggestions made this morning will be most beneficial to the Committee in its further study of the problems, when it comes to make its final recommendations to the Legislature.

On behalf of the Committee, thank you very much, gentlemen.

DOCTOR GROULX: We thank you, Mr. Chairman. We have been very pleased to receive you this morning. I hope the information we have been able to give you has been of some help, and if you have some further suggestions, when you get back, after studying the whole problem, we will be very happy to receive them from you.

To complete this meeting; as I told you at the opening, we will be happy to have you at luncheon at St. Helen Island, managed by the city itself. It is a good restaurant, and a nice place, and serves good food.

Unfortunately, there is no liquor license, and we cannot offer you any aperitifs there.

Before leaving, I hope you will allow me to give you the opportunity of signing our visitors' books, and I hope the city photographer will be here before



we leave.

Thank you very much, gentlemen, for being here. If there is any further information you require from us, please write to us, and we will be very pleased to furnish it.

THE CHAIRMAN: Thank you very much.

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---Whereupon at 12:00 o'clock noon, the further proceedings of this Committee adjourned sine die.

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